Readopt with amendments Env-Wm 1401 effective 4-24-97 (Document #6499), to read as follows:

PART Env-Wm 1401 UNDERGROUND STORAGE FACILITIES

Statutory Authority: RSA 146-C:9 and RSA 146-A:11-c

Env-Wm 1401.01 Purpose. The purpose of these rules is to set forth the requirements for underground storage facilities under RSA 146-C to prevent and minimize contamination of the land and waters of the state due to the storage and handling of motor fuels, heating oils, lubricating oils, other petroleum and petroleum contaminated liquids, and hazardous substances, by establishing criteria for registration and permitting, and standards for design, installation, operation, maintenance, and monitoring of such facilities.

Env-Wm 1401.02 Applicability. These rules shall apply to all underground storage facilities having ~~a total~~ ***an individual*** ~~storage~~ ***tank*** capacity of ~~more than~~ ***greater than*** 110 gallons ***or of unknown size*** ~~which are used for the storage of~~ ***that store or have stored*** regulated substances ~~, or of unknown size~~ with the following exclusions:

(a) Underground storage facilities ~~which~~ ***that*** are used solely for residential heating use;

(b) Underground storage facilities having no tank with a storage capacity of more than 1,100 gallons and which are used solely for the storage of heating oil for on-premises use;

(c) Systems where less than 10% of the total volume of the tank(s) and associated piping is below the surface of the ground;

(d) Any system ~~which~~ ***that*** is located in an underground room or vault if the system is totally above or upon the surface of the floor, and no portion of any tank is covered, surrounded, or buried with soil or stone or other material, and all system components can be visually inspected;

(e) Emergency spill or overflow containment systems that are ~~immediately~~ emptied ~~after~~ ***within 48 hours of the*** introduction of a regulated substance;

(f) Equipment or machinery that contains regulated substances for operational purposes such as hydraulic lift tanks and electrical equipment tanks;

(g) Oil-transmission pipelines subject to the Natural Gas Pipeline Safety Act of 1968 or the Hazardous Liquid Pipeline Safety Act of 1979;

(h) ***Oil/water separators at*** ~~W~~***w***astewater treatment facilities ~~including oil/water separators~~ regulated by the Clean Water Act Section 402 or 307(b), and oil/water separators at oil and gas production facilities;

(i) Septic tank systems or floor drain collection tank systems that collect waste for the

purpose of segregating such waste from septic systems;

(j) Flow-through process systems which form an integral part of a production process through which there is a steady, variable, recurring, or intermittent flow of materials during the operation of the process. Flow-through process systems shall not include tanks used for the storage of materials prior to their introduction into the production process or for the storage of finished products or by-products from the production process;

(k) Facilities containing radioactive material regulated under the Atomic Energy Act of 1954; and

(l) Underground storage facilities ~~which~~ ***that*** store products containing concentrations of regulated substances ~~which~~ ***that*** are less than the allowable drinking water standard for the regulated substances.

Env-Wm 1401.03 Definitions.

(a) "As-Built Record Drawing(s)" means a facility plan that clearly delineates the plan as As-Built Record Drawing(s) that records the actual installation conditions for a new facility or for a substantially modified facility.

(b) "Backfill" means a process that includes covering tanks, piping, and system equipment with materials required by the manufacturer's specifications and the placement of paving and concrete pads over the backfill materials.

(c) "Cathodic protection system" means a system used to reduce the corrosion of a metal surface by making that surface the cathode of an electrochemical cell using either a sacrificial anode or impressed current system.

(~~a~~***d***) "Cathodic protection tester" means an individual who is certified by NACE International or the International ~~Fire Code Institute~~ ***Code Council*** as having qualification in the measurements of cathodic protection of buried metal piping systems and tanks.

(~~b~~***e***) "Certified tank installer~~s~~" means an individual who is certified by the International ~~Fire Code Institute~~ ***Code Council*** in underground storage tank ***system*** installation/retrofitting and certified as a qualified installer by the ***equipment*** manufacturer as being qualified in the installation of ~~a tank~~ ***the manufacturer's equipment*** or individual system components.

(~~c~~***f***) "Certified tank remover" means an individual who is certified by the International ~~Fire Code Institute~~ ***Code Council*** in underground storage tank system decommissioning and has a knowledge of national underground storage tank regulations and industry standards.

~~(d) "Community water system" means "community water system" as defined by RSA 485:1-a, I, namely, "a public water system which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents."~~

(~~e~~***g***) "Compatible" means the ability of 2 or more substances to maintain their respective physical and chemical properties upon contact with one another for the design life of the tank system under conditions likely to be encountered in the underground storage system.

(~~f~~***h***) "Connected piping" means all piping, including valves, elbows, joints, flanges, ***fittings,*** and flexible connectors, attached to a tank or system through which regulated substances flow.

(~~g~~***i***) "Corrosion expert " means an individual who is either certified by NACE International or who is a ***qualified*** registered professional engineer with ***certification or licensing that includes*** education and experience in corrosion control of buried metal piping systems and ***metal*** tanks.

(~~h~~***j***) "~~Division~~ ***Department***" means ~~the division of waste management of~~ the department of environmental services.

(~~i~~***k***) "Excavation zone" means the volume containing the tank system and backfill material bounded by the ground surface, walls, and floor of the pit and trenches into which the underground storage tank system is placed at the time of installation.

(~~j~~***l***) "Facility" means "facility" as defined in RSA 146-C:1, namely, "means an assemblage of tanks, pipes, pumps, vaults, fixed containers, and appurtenant structures, singly or in any combination, which are used or designed to be used for the storage, transmission, or dispensing of oil or a hazardous substance, and which are within the size, capacity, and other specifications prescribed by rules adopted by the department pursuant to RSA 146-C:9, VI.**"**

~~(k) "Free product" means a regulated substance that is present as a non-aqueous phase liquid on groundwater, or surface water, or in soil or bedrock.~~

(~~l~~***m***) "Heating oil" means petroleum as follows:

(1) No. 1;

(2) No. 2;

(3) No. 4-light;

(4) No. 4-heavy;

(5) No. 5-light;

(6) No. 5-heavy;

(7) No. 6-technical grades of fuel oil;

(8) other residual fuel oils;

(9) Navy Special Fuel Oil;

(10) Bunker C; and

(11) other fuels, excluding ~~waste~~ ***used*** oil, when used as substitutes for any of these fuel oils.

(n) "Hydrostatic test" means a test designed to evaluate the tightness of an underground storage tank system component that is performed in accordance with manufacturer's requirements or nationally recognized industry codes of practice using pressure of liquid to test for tightness.

(~~m~~***o***) "Impressed current system" means a system ~~which~~ ***that*** prevents corrosion to a metal ~~tank~~ surface by making the metal surface the cathode of an electrochemical cell, using a power source called a rectifier connected to buried metal anodes which are connected to the ~~tank~~ ***system*** surface by a wire.

~~(n) "Large community or non-transient non-community water supply well" means a well which produces equal to or greater than 57,000 gallons daily for a community or non-transient, non-community water system.~~

(~~o~~***p***) "Leak monitoring" means the detection of a regulated substance before a release to the environment has occurred.

(~~p~~***q***) "Lining" means a coating of a non-corrosive material bonded to the interior surface of a tank.

(r) "Liquid-tight" means no liquid can be released.

(~~q~~***s***) "Marina" means a ~~commercial~~ waterfront facility whose principal use is the provision of ~~publicly~~ available services such as the securing, launching, storing, fueling, servicing and repairing of watercraft.

(~~r~~***t***) "Monthly" means once every calendar month.

(~~s~~***u***) "Motor fuel" means petroleum or a petroleum-based substance that is motor gasoline, aviation gasoline, jet fuel, ~~No. 1 or No. 2~~ diesel fuel, or any grade of gasohol, and which typically is used ~~in the operation~~ ***to fuel*** ~~of~~ a motor engine.

(~~t~~***v***) "New underground storage tank site" means a parcel of land where no ***regulated*** underground storage tank system~~s~~ ~~have~~ ***has*** existed and on which the installation of a system is proposed.

~~(u) "Non-transient non-community water system" means "non-transient non-community water system" as defined by RSA 485:1-a, XI, namely, "a system which is not a community water system and which serves the same 25 people, or more, over 6 months per year."~~

(~~v~~***w***) "Oil" means "oil" as defined in RSA 146-A:2,III, namely, "petroleum products and

their by-products including, but not limited to, petroleum, fuel, sludge, crude and all other liquid hydrocarbons regardless of specific gravity. Notwithstanding the above, the term "oil" does not include natural gas, liquidifed petroleum gas or synthetic natural gas regardless of derivation or source.**"**

(x) "Operate" means to store a regulated substance in an underground storage tank system.

(~~w~~***y***) "Operating day" means a 24-hour period in which any product has been put into or removed from the tank.

(~~x~~***z***) "Owner" means "owner" as defined in RSA 146-C:1, XIV, namely, "the person in possession of or having legal ownership of a facility. In addition, for facilities no longer in use "owner" includes the person having had legal ownership of such facility immediately prior to discontinuance of its use."

(~~y~~**aa**) "Pipe" means an impermeable hollow cylinder or tubular conduit that conveys or transports oil***,*** ~~or~~ liquid, ***or vapors,*** or that is used for venting, filling, or removal of oil or liquids.

(ab) "Piping system" means all underground storage tank connected piping, pipe, pumps, monitor and secondary containment associated with the conveying, venting, filling or dispensing of a stored substance or vapors of the stored substance.

(ac) "Pneumatic test" means a test designed to evaluate the tightness of an underground storage tank system component performed in accordance with the manufacturers' requirements or nationally recognized industry codes of practice using positive or negative gauge pressure of air to test for tightness.

(ad) "Public water system" means "public water system" as defined by RSA 485:1-a, XV, namely, "a system for the provision to the public of piped water for human consumption, if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. Such term includes (1) any collection, treatment, storage, and distribution facilities under control of the operator of such system and used primarily in connection with such system, and (2) any collection or pretreatment storage facilities not under such control which are used primarily in connection with such system. Any water system which meets all of the following conditions is not a public water system: (a) Consists only of distribution and storage facilities (and does not have any collection and treatment facilities); (b) Obtains all of its water from, but is not owned or operated by, a public water system; and (c) Does not sell water to any person.

(~~z~~***ae***) "Reconcile" means to compare the volume of stored regulated substance at the beginning of an inventory period with receipts, sales, and other uses during the inventory period, and with volume stored at the end of the inventory period, to determine whether there is any unaccounted gain or loss of regulated substance.

(***af***) "Regulated substance" means oil or a hazardous substance ***as defined in RSA 146-C:9, VI-a.***

(***abg***) "Release detection" means determining whether a release of a regulated substance has occurred.

(***ach***) "Repair(s)" means to fix or replace ***in kind*** an integral unit of piping of less than 25 feet or any existing defective or damaged part of an underground storage tank system to meet the requirements of Env-Wm 1401.

(***adi***) "Sacrificial Anode" means a system used which prevents corrosion to a metal tank surface by making the metal surface the cathode of an electrochemical cell, using zinc or magnesium anodes buried in the ground close to the metal surface ~~which~~ ***that*** are connected to the tank surface by a wire.

(***aej***) "Secondary containment" means a containment system such as a double-wall tank or a single-wall tank with a concrete vault ~~which~~ ***that*** prevents regulated substance that has discharged or leaked from the primary containment system from impacting the land and waters of the state.

~~(af) "Small community or non-transient, non-community water supply well" means a well which produces less than 57,000 gallons per day for a community or non-transient, non-community water system.~~

(ak) "Significant modification" means any construction or alteration of a stage I or stage II system other than normal upkeep or maintenance as defined in Env-Wm 1404.

(al) "Stage I or stage I system" means the stage I equipment installed such that gasoline vapors displaced from the gasoline storage tank are recovered and fed back into the cargo truck during product delivery.

(am) "Stage II or Stage II system" means equipment installed at a gasoline dispensing facility such that gasoline vapors displaced from a motor vehicle fuel tank are recovered into the facility's gasoline storage tank during refueling of the motor vehicle, as defined in Env-Wm 1404.

(***agn***) "Substantial modification" means "substantial modification" as defined in RSA 146-C:1, XVI, namely, "the construction or installation of any addition to a facility or any restoration or renovation of a facility which: increases or decreases the on-site storage capacity of the facility; significantly alters the physical configuration of the facility; or impairs or improves the physical integrity of the facility or its monitoring systems. On-site abandonment is specifically excluded as a "substantial modification" of a facility."

(***aho***) "Surface waters of the state" means "surface waters of the state" as defined by RSA 485-A:2, XIV, namely, "streams, lakes, ponds and tidal waters within the jurisdiction of the state, including all streams, lakes or ponds bordering on the state, marshes, water courses and other bodies of water, natural or artificial."

~~(ai) "System" means an underground storage tank(s) and all connected piping, pumps,~~

~~containment structures, monitors, or other equipment serving the tank(s).~~

(a~~j~~***p***) "Tank" means a stationary device constructed of impermeable materials and designed to contain or hold regulated substances, which is a component of an underground storage system.

(***a~~k~~q***) "Underground storage tank facility" means "underground storage tank facility" as defined in RSA 146-C:1,XVIII, namely, "means a facility or facility component that is 10 percent or more below the surface of ground and is not fully visible for inspection."

(ar) "Underground storage tank system" or "system" means an underground storage tank(s) and all connected piping that routinely contains a regulated substance or vapors of the regulated substance.

(a~~l~~***s***) "~~Waste~~ ***Used*** oil" means an oil which, through use or handling, has become unsuitable for its original purpose due to the presence of impurities or loss of original properties, but which still has sufficient liquid content to be free flowing.

Env-Wm 1401 .04 Registration.

(a) Pursuant to RSA 146-C:3, the owner of an underground storage facility shall register the facility ***with the department on registration forms provided by the department*** ~~by providing~~ ***and shall provide*** ~~the~~ information required by RSA 146-C:3, I and II ***and Env-Wm 1401.06***.

(b) Owners shall submit in writing to the ~~division~~ ***department*** any change in facility status such as ownership and equipment within 10 days of the change. ***If there is a change in ownership of the facility, a new registration form shall be submitted to the department.***

(c) If facility ownership is disputed, the owner of the property on which the facility is located shall register the facility, shall be deemed to be the facility owner, and shall provide the information required by Env-Wm 1401.06.

(d) For new systems or substantial modifications of existing systems, a new or amended registration form, respectively, shall be filed with the ~~division~~ ***department*** at the time of final inspection of the system.

(e) No person shall operate an underground storage facility ~~which~~ ***that*** is not registered with the ~~division~~ ***department***.

Env-Wm 1401.05 Change in Use. The owner of any facility ~~which~~ ***that*** would become subject to regulation under Env-Wm 1401 due to a change in the use of any system at the facility shall register the facility at least 30 days prior to changing the use of the system and shall comply with all applicable requirements before instituting the changed use.

Env-Wm 1401.06 Information Required for Registration.

(a) In addition to the information required by RSA-146-C:3, the following shall be

submitted to register each underground storage facility:

(1) The type of owner, such as federal government, state government, local government, commercial, or private;

(2) The type of facility, such as gas station, petroleum distributor, air taxi, aircraft owner, auto dealership, railroad, local government, state government, federal non-military, federal-military, commercial, industrial, contractor, trucking/transportation, utilities, farm or residential, or other;

(3) The number of tanks permanently closed, and the date of such closure for each tank;

(4) The number of tanks temporarily closed, and the date of such closure for each tank;

(5) Change in ownership;

(6) The certification of compliance as specified in (b)**,** below; and

(7) Proof of financial responsibility as specified in Env-Wm 1401.10.

(b) The owner shall agree to and sign the following: "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate and complete."

(c) The information required in (a) and (b)**,** above shall be submitted on a registration form obtained from the ~~division~~ ***department***.

Env-Wm 1401.07 Permit to Operate.

(a) As specified in RSA 146-C:4, I, no person shall operate an underground storage facility without a ***valid*** permit issued by the ~~division~~ ***department***.

(b) The owner of an underground storage facility shall apply to the ~~division~~ ***department*** for a permit to operate by providing the following:

(1) All information required for registration, specified in Env-Wm 1401.06;

~~(2) The permit fee required by RSA 146-C:4; and~~

(~~3~~***2***) ~~A~~ ***An underground storage tank*** certification of compliance, signed by the owner, which states that the facility is in compliance with all applicable statutory and regulatory requirements~~.~~***;***

(3) A stage I certification of compliance, in accordance with Env-Wm 1404; and

(4) A stage II certification of compliance in accordance with Env-Wm 1404.

(c) A permit issued under this section shall be displayed in such a way as to be permanently affixed on the facility premises and visible to a ~~division~~ ***department*** inspector.

(d) The permit to operate shall be valid for a period of 5 years ***by maintaining compliance with these rules***.

(e) The permit to operate shall apply to all underground storage systems at the facility.

(f) If the ~~division~~ ***department*** determines that a facility is not in compliance with applicable statutory and regulatory requirements, the ~~division~~ ***department*** shall issue a notice of ~~non-compliance and permit revocation~~ ***proposed license action*** to the owner, which includes~~:~~ ***all the information specified in Env-Wm 1401.09.***

~~(1) A listing of compliance deficiencies;~~

~~(2) A requirement for achieving compliance within 90 days of receipt of the notice; and~~

~~(3) The date of permit revocation upon failure of the owner to achieve compliance or request an opportunity for hearing.~~

(g) At least 60 days prior to the permit expiration date, the owner shall apply for permit renewal by providing the information required by Env-Wm 1401.07(b).

(h) When a ***written request for a*** permit ~~renewal application~~ is received, the ~~division~~ ***department*** shall determine the compliance status of the facility with respect to Env-Wm 1401 ***and Env-Wm 1404***. The ~~division~~ ***department*** shall also determine the compliance status of any ~~Env-Ws 410.19, .22, .23, .26 and .27~~ ***Env-Wm 1403.07, .08, .13, .14, and .15*** corrective action requirements, and any Env-Ws 412 regulated substance release response requirements. The ~~division~~ ***department*** shall not issue a ~~renewal~~ permit if the facility is not in compliance with all the requirements of ~~Env-Ws 410.19, .22, .23, .26 and .27, Env-Wm 1401, and Env-Ws 412~~ ***Env-Wm 1403.07, .08, .13, .14, and .15 and Env-Ws 412***. If the ~~division~~ ***department*** has not determined the compliance status of the facility by the permit expiration date***,*** and if the owner has applied to the ~~division~~ ***department*** in accordance with the above, a ~~renewal~~ permit shall be issued.

(i) If a ***written request for a*** permit ~~renewal application~~ is not received by the ~~division~~ ***department***, the ~~operator~~ ***owner*** shall cease operating the facility no later than the permit expiration date, and the owner shall close all systems at the facility under Env-Wm 1401.17 or Env-Wm 1401.18.

Env-Wm 1401.08 Transfer of Facility Ownership.

(a) When a transfer of ownership of any underground storage tank facility takes place, the

new owner shall file an amended registration form with the ~~division~~ ***department*** within 10 days of the transfer.

(b) The seller shall deliver to the buyer all documents and information related to the facility regarding:

(1) Inventory;

(2) ~~New~~ ~~i~~***I***nstallations;

(3) Testing;

(4) Closure or removals;

(5) Lining;

(6) Monitoring;

(7) Sampling and analysis;

(8) Site assessments;

(9) Equipment maintenance;

(10) Repairs;

(11) Compliance history;

(12) Financial responsibility; and

(13) Any other records required to be maintained by these rules.

Env-Wm 1401.09 ~~Revocation of Permit to Operate~~ ***Permit to Operate: Suspension, Revocation, or Refusal to Renew***.

(a) If the ~~division~~ ***department*** determines that a facility is not in compliance with applicable ~~statutory and regulatory~~ requirements, the ~~division~~ ***department*** shall issue a notice of ~~non-compliance and permit revocation~~ ***proposed license action*** to the owner~~, which includes:~~**.**

~~(1) A listing of compliance deficiencies;~~

~~(2) A requirement for achieving compliance within 90 days of receipt of the notice; and~~

~~(3) The date of permit revocation upon failure of the owner to achieve compliance or request an opportunity for hearing.~~

~~(b) A facility owner may appeal a notice of non-compliance and permit revocation to the Waste Management Council in accordance with RSA 21-O:14, and Env-WMC 203.~~

(b) The notice of proposed license action shall state with specificity:

(1) The violations that the department believes exist at or relating to the facility;

(2) The action the department proposes to take, such as suspending, revoking, or refusing to renew the facility's permit to operate;

(3) That the owner has an opportunity for a hearing prior to a final decision being made; and

(4) That the owner may seek an informal disposition of the matter through discussions with the department.

(c) If the matter goes to a hearing and the facility owner is aggrieved by the final decision on the matter, the owner may appeal to the Waste Management Council in accordance with RSA 146-C:4, I, within 20 days of the date of issuance of the final decision.

Env-Wm 1401.10 Financial Responsibility.

(a) Owners of underground storage facilities for oil shall maintain financial responsibility for costs associated with the cleanup of releases from systems, the implementation of corrective measures, and compensation for third party damages in the amount equal to or greater than $1,000,000 per occurrence.

(b) The amount of financial responsibility required shall not limit an owner's or operator's liability for damages caused by a release.

(c) The requirement for financial responsibility may be satisfied if the owner of a facility is eligible for reimbursement of costs associated with cleanup of releases from systems, under RSA 146-D.

Env-Wm 1401.11 Inventory Monitoring.

~~(a) The owner of an underground storage facility shall conduct inventory monitoring of each underground storage tank, and shall maintain separate records for each tank and interconnected system.~~

~~(b) Fuel oil systems containing Bunker C, no. 4, no. 5, or no. 6 fuel oil shall be exempt from inventory control.~~

(a) The operator of an underground storage facility shall conduct inventory monitoring of each underground storage tank, and shall maintain separate records for each tank and

interconnected system.

(b) An underground storage tank system shall be exempt from inventory monitoring when:

(1) The secondary containment of the underground storage tank is continuously monitored for both regulated substance and water; or

(2) The underground storage tank contains Bunker C, no. 4, no. 5, or no. 6 fuel oil.

(c) Double-wall on-premise-use heating oil tanks with single wall or double wall suction, atmospheric, or pressurized piping without leak monitoring shall perform a line tightness test in accordance with Env-Wm 1401.30(o), once every 3 years;

(d) The owner shall submit test results to the department within 30 days of the date of the test. Pipe pressure tightness test shall have a detection limit equivalent to 0.1 gallon per hour at 1.5 times operating pressure.

(e) Double-wall on-premise-use heating oil tanks with single wall or double wall suction or atmospheric piping without leak monitoring shall not be required to conduct a piping tightness test when it is demonstrated, by department inspection or by plans submitted by the owner, to be designed and constructed to meet the following standards:

(1) The piping operates at atmospheric pressure or at less than atmospheric pressure;

(2) The piping is continuously sloped so that the contents of the piping will drain back into the storage tank if the suction is released;

(3) No more than one check valve is included in each suction line; and

(4) The check valve is located directly below and as close as practical to the suction pump.

(f) A tightness test failure shall be indicated by a test result of 0.10 gallon per hour or greater or an inconclusive test and shall be addressed as follows:

(1) The owner shall perform an investigation into the cause of the failure to determine if a release has occurred in accordance with Env-Wm 1403;

(2) The investigation into the cause of an initial test failure shall be completed within 7 days;

(3) The owner shall submit a written report to the department within 30 days of the failure which describes the work performed, the repairs made, and any other actions taken in response to the test failure; and

(4) Any piping system that has been repaired shall be retested for tightness to confirm the effectiveness of the repairs.

(g) When the cause of the failure is unknown or there is a possible release to the environment, the owner shall notify the department within 24 hours of the occurrence in accordance with Env-Wm 1403.

(~~c~~***h***) An ~~owner~~ ***operator*** shall begin inventory monitoring ~~and perform system tightness testing in accordance with Env-Wm 1401.13~~ for any underground storage tank system for which inventory monitoring has not been performed in accordance with Env-Wm 1401.11~~,~~. ~~or for which records have not been maintained in accordance with these rules.~~ ***The department may request that the owner perform a system tightness test, pursuant to Env-Wm 1401.13, on any underground storage tank system for which inventory monitoring has not been performed, or for which records have not been maintained in accordance with these rules.***

(~~d~~***i***) ~~Owners of motor fuel, bulk storage fuel oil or hazardous substance systems without secondary containment and leak monitoring for both tank and~~ ~~piping~~ ***Operators of single wall underground storage tanks containing motor fuel, bulk storage fuel oil or hazardous substance*** shall perform the following:

(1) The ~~owner~~ ***operator*** shall reconcile inventory data daily and monthly;

(2) Measure the liquid stored using:

a. A gauge stick which shall be capable of measuring the level of liquid in the tank to the nearest 1/8 inch; or

b. Using an automatic tank gauging device of equivalent or better measuring accuracy.

(3) Notify the ~~division~~ ***department*** within 24 hours if any of the following occurs:

a. The water in the tank changes by 2 inches or more over one month or any shorter period;

b. Any tank contains a total water depth of 3 inches or more; or

c. The monthly reconciled inventory records show an unexplained gain or loss of regulated substance greater than 1.0 percent of the pump meter reading plus 130 gallons;

(4) Maintain all records relating to inventory monitoring, including sales receipts for a period of 3 years; and

(5) Perform a tightness test, pursuant to Env-Wm 1401.13, on any system with an unexplained gain or loss of regulated substance greater than 1.0 percent of the pump

meter reading plus 130 gallons**,** or with a change in water level of 2 inches or more in any one month, or total water depth of 3 inches or more.

(~~e~~***j***) Inventory records for ***single wall underground storage tanks containing*** motor fuel, bulk storage fuel oil or hazardous substance ~~systems without secondary containment and leak monitoring for both tank and piping~~ shall ***be recorded on a form obtained from the department, or another representative form with the required data, and shall*** include the following:

(1) Facility registration number;

(2) Tank number and volume;

(3) The type of substance being stored;

(4) ~~Tank contents in gallons before and~~ ***Manual measurement of the tank contents in gallons before each delivery*** ~~after each delivery~~;

(5) Measurement of the tank contents in gallons after each delivery;

(6) All bulk liquid delivery receipts;

(~~6~~***7***) Total liquid gallons of sales or uses for each operating day;

(~~7~~***8***) Measurement in gallons of liquid stored for each operating day;

(~~8~~***9***) Monthly measurement in inches of water level;

(~~9~~***10***) Daily loss or gain of product in gallons for each operating day;

(~~10~~***11***) Total monthly gallons of loss or gain of product;

(~~11~~***12***) Total monthly liquid gallons of sales or use;

(~~12~~***13***) Monthly maximum gain or loss in product allowed by the ~~division~~ ***department*** before notification is required; and

(~~13~~***14***)~~Owner~~ ***Operator*** signature certifying the accuracy of the monthly inventory records.

(~~f~~***k***) ~~Owners~~ ***Operators*** of on-premise-use heating oil ~~systems~~ ***single wall underground storage tanks*** that are not exempt under Env-Wm 1401.02(b) or emergency generator ~~systems without secondary containment and leak monitoring for both tank and piping~~ ***single wall underground storage tanks*** shall perform inventory ~~control~~ ***monitoring*** by annual tank gauging in accordance with the following requirements:

(1) The tank shall be filled to the maximum level allowed by the overfill prevention device;

(2) Tank oil and bottom water level measurements shall be recorded at the beginning and end of an idle period of at least 30 days, during which no oil shall be added to or removed from the tank;

(3) All measurements shall be based on an average of ***at least*** 2 consecutive readings;

(4) The measurement equipment used shall be capable of measuring the level of oil over the full range of the tank's height to the nearest 1/8 of an inch;

(5) If the results of the annual tank gauging indicate a change in water level of 2 inches or more, or a loss or gain of oil, the owner shall notify the ~~division~~ ***department*** within 24 hours;

(6) Records of oil and water measurement data shall be maintained for a period of 3 years;

(7) A tightness test shall be performed, pursuant to Env-Wm 1401.13, on any system with an unexplained gain or loss of oil, or a total water depth of 3 or more inches~~; and~~ ***or***

~~(8) Release detection methods as specified in Env-Wm 1401.29 and Env-Wm 1401.30 may be substituted for annual tank gauging as required by this section.~~ ***Release detection methods specified in Env-Wm 1401.29 and .30 or a tightness test specified in Env-Wm 1401.13 that monitors the portion of the single wall underground storage tank system, may be substituted for annual tank gauging.***

(~~g~~***l***) Records for when inventory ~~control~~ ***monitoring*** is by annual tank gauging for on-premise-use heating oil ~~systems~~ ***single wall underground storage tanks*** or emergency generator ~~systems without secondary containment and leak monitoring for both tank and piping~~ ***single wall underground storage tanks shall be recorded on a form obtained from the department, or an equivalent form shall*** include the following:

(1) Facility registration number;

(2) Tank number and volume;

(3) The type of substance being stored;

(4) Measurement in inches of water and product with the date taken; ~~and~~

(5) ~~Owner~~ ***Operator*** signature certifying the accuracy of the annual tank gauging records~~.~~***; and***

(6) The owner shall maintain all records relating to inventory monitoring for a period of 3 years.

(m) When release detection or tightness testing is used for inventory monitoring, the records for inventory monitoring shall include all of the reporting requirements specified in Env-Wm 1401.13, .29 and .30.

(~~h~~***n***) ~~Owners~~ ***Operators*** of ~~waste~~ ***used*** oil ~~systems~~ ***single wall underground storage tanks*** ~~without secondary containment and leak monitoring for both tank and piping~~ shall perform inventory control by monthly tank gauging in accordance with the following requirements:

(1) Tank oil and water level measurements shall be recorded at the beginning and end of an idle period of at least 36 hours, during which no oil shall be added to or removed from the tank;

(2) All measurements shall be based on an average of at least 2 consecutive readings;

(3) The measurement equipment used shall be capable of measuring the level of oil over the full range of the tank's height to the nearest 1/8 of an inch;

(4) If the results of the monthly tank gauging indicate a change in water level, or a loss or gain of oil, the owner shall notify the ~~division~~ ***department*** within 24 hours;

(5) Records of oil and water measurement data shall be maintained for a period of 3 years;

(6) A tightness test shall be performed, pursuant to Env-Wm 1401.13, on any system with an unexplained gain or loss of oil, or an unexplained change in water level; ~~and~~ ***or***

(7) ~~Release detection methods as specified in Env-Wm 1401.29 and Env-Wm 1401.30 may be substituted for monthly tank gauging as required by this section.~~ ***Release detection methods specified in Env-Wm 1401.29 and .30 or a tightness test specified in Env-Wm 1401.13 that monitors the portion of the single wall underground storage tank system, may be substituted for annual tank gauging.***

(~~i~~***o***) Inventory records for ~~waste~~ ***used*** oil ~~systems without secondary containment and leak monitoring for both tank and piping~~ ***single wall underground storage tanks*** shall ***be recorded on a form obtained from the department, or an equivalent form shall*** include the following:

(1) Facility registration number;

(2) Tank number and volume;

(3) The type of substance being stored;

(4) Measurement in inches of water and product with the date and time taken; ~~and~~

(5) ~~Owners~~ ***Operators*** signature certifying the accuracy of the monthly tank gauging records~~.~~ ***and;***

(6) The owner shall maintain all records relating to inventory monitoring for a period of 3 years.

(p) When release detection or tightness testing is used for inventory monitoring, the records for inventory monitoring shall include all of the reporting requirements specified in Env-Wm 1401.13, .29 and .30.

Env-Wm 1401.12 Regulated Substance Transfers.

(a) The facility owner ***or product distributor*** shall not allow transfer of regulated substances to be made to any facility ~~which~~ ***that*** is not registered ~~or~~ ***and*** which does not have a ***current*** permit to operate.

(b) Immediately prior to transferring any regulated substance into a tank, the owner***, operator, or product distributor*** shall determine that the tank has sufficient receiving capacity to hold the volume to be transferred.

(c) No transfer shall be made to a tank ~~which~~ ***that*** is not equipped with spill and overfill protection devices, as required by Env-Wm 1401.25.

(d) No transfer shall be made to a tank that is not equipped with a stage I system as required by Env-Wm 1404.

Env-Wm 1401.13 Tightness Testing.

~~(a) All underground storage systems without secondary containment and leak monitoring shall be tightness tested in accordance with (c) through (j)**,** below if the system was not tightness tested since November 9, 1989.~~

~~(b) Underground storage systems for which inventory monitoring in accordance with Env-Wm 1401.11 has not been performed or for which inventory records required by these rules have not been maintained, the owner shall tightness test the system in accordance with (c) through (j), below.~~

(~~c~~***a***) The tank tightness testing protocol or method shall be tested and certified by an independent testing laboratory and shall be certified by the laboratory to meet the leak rate detection criteria of (g)**,** below. A complete description of the method or protocol and a copy of the certification shall be filed with the owner. The owner shall retain the description and certification for the life of the facility.

(~~d~~***b***) When a tightness test is performed, the owner shall send a tightness test report to the ~~division~~ ***department*** no later than 30 days after the date of the test.

(~~e~~***c***) The tightness test report shall include:

(1) The facility and tank registration number;

(2) System location;

(3) The name, address and telephone number of the system owner;

(4) Tank capacity;

(5) The age of the tank;

(6) Product stored;

(7) Location of each system tested;

(8) A copy of field ~~each of the~~ technician's testing records;

(9) Any other information to accurately identify each system;

(10) A statement specifying that the piping was also tested;

(11) A description of any piping, fittings, or connections that were tightened or repaired;

(12) The length of any waiting periods after product delivery, topping, or vapor space disturbances;

(13) A description of the temperature measurement equipment and method used for the tightness test;

(14) A description of the releveling procedure used;

(15) The date of last calibration and maintenance of tightness testing equipment;

(16) Test duration time; and

(17) A description of the vapor pocket measurement and elimination procedure used.

(~~f~~***d***) The technician performing the test shall sign a test report ~~which~~ ***that*** certifies:

(1) The validity, method, and accuracy of the test;

(2) That the test complies with requirements of these rules; and

(3) That he or she is qualified to perform the test.

(~~g~~***e***) The tightness test shall be capable of detecting a system leak rate of 0.10 gallon per hour with a probability of detection of 0.95 and a probability of false alarm of 0.05, accounting for all variables including vapor pockets, thermal expansion of product, temperature stratification, evaporation, pressure, end deflection, water table, and tidal action.

(~~h~~***f***) A leak or failure shall be indicated by a test result of 0.10 gallon per hour or greater or an inconclusive test result.

(~~i~~***g***) The test report and other documents describing the type of test, contractor, date, materials, all technician testing data and any other information pertinent to the work performed under this section shall be kept by the owner for the life of the system.

(~~j~~***h***) If information submitted to the ~~division~~ ***department*** causes the ~~division~~ ***department*** to question the accuracy of the test, the person conducting tank tightness tests shall provide the ~~division~~ ***department*** with information on all testing equipment and protocols which have the potential to affect the accuracy of the test within 10 days of the ~~division~~ ***department*** requesting the information.

Env-Wm 1401.14 Certification of Technicians Performing Tightness Tests.

(a) Any person conducting tank tightness tests shall have an understanding of the variables which affect the test, be trained in the performance of the test, and be certified as qualified by the manufacturer of the equipment used in the testing protocol or method. The technician shall register with the ~~division~~ ***department*** by submitting a manufacturer's training certificate.

(b) Any person conducting tank tightness tests shall keep current the manufacturer's certification and registration with the ~~division and shall notify the division of any change in employment status~~ ***department***.

(c) No person shall conduct a tank tightness test to fulfill the requirements of these rules who is not certified and registered under (a) and (b)**,** above.

Env-Wm 1401.15 Tightness Test Failures.

(a) The person conducting the tightness test shall notify the ~~division~~ ***department*** and the facility owner and operator immediately of a system tightness test failure, as defined in Env-Wm 1401.13(~~h~~***f***).

(b) The owner of an underground storage system shall report any failure to the ~~division~~ ***department*** within 24 hours of receiving notice of the failure;

(c) A tightness test failure shall be addressed as follows:

(1) The owner shall perform an investigation into the cause of the failure to determine if the system is leaking;

(2) The investigation into the cause of an initial test failure shall be completed within 7 days;

(3) The investigation into the cause of an initial test failure shall include the performance of a second confirming tank tightness test; and

(4) The owner shall submit a written report to the ~~division~~ ***department*** within 30 days of the failure ~~which~~ ***that*** describes the work performed, the repairs made, and any other actions taken in response to the test failure.

(d) Any system ~~which~~ ***that*** has been repaired shall be retested for tightness to confirm the effectiveness of the repairs.

(e) The owner may temporarily close the system within 7 days of the initial failure and permanently close the system in accordance with Env-Wm 1401.18 within 30 days of the original test failure instead of conducting an investigation in accordance with (c) (2), (3) and (d)**,** above into the cause of the failure.

(f) Any underground storage system which fails the second confirming test for tightness shall be completely emptied of regulated substance within 24 hours of the second failure and permanently closed, in accordance with Env-Wm 1401.18 within 30 days.

Env-Wm 1401.16 Unusual Operating Conditions.

(a) The owner shall report any unusual system operating conditions to the ~~division~~ ***department*** within 24 hours, unless the cause is immediately determined and corrected, and the owner determines that the unusual operating condition did not result in a release of a regulated substance.

(b) Unusual system operating conditions ~~which~~ ***that*** shall require reporting shall include:

(1) Erratic behavior of dispensing equipment;

(2) An increase of 2 inches or more of water in a tank over any 30 day or shorter period or a total water depth of 3 inches or more;

(3) An indication by a ~~leak monitor~~ ***monitoring system*** of a possible leak; and

(4) The presence near the facility of petroleum vapors or vapors of a hazardous substance.

(5) Erratic behavior of the stage I or stage II system, as defined in Env-Wm 1404.

(c) The owner shall initiate an investigation into the cause of any unusual system operating conditions within 24 hours of the occurrence of the condition and shall submit a written report within 7 days to the ~~division~~ ***department*** delineating the investigation and its conclusions.

(d) If unusual operating conditions occur as in (b)**,** above, the owner shall conduct a tightness test ***in accordance with Env-Wm 1401 and Env-Wm 1404 requirements to determine the tightness*** of the affected system(s) within 7 days of being notified by the ~~division~~ ***department*** that the test is required.

Env-Wm 1401.17 Temporary Closure.

(a) Temporary closure of underground storage systems shall be accomplished by removing all substances from the ~~tank~~ ***system*** so that no more than one inch of residue remains in the ~~system~~ ***tank***. All substances removed shall be handled and disposed of in accordance with applicable local, state, and federal rules. ***All openings, such as fill risers, shall be equipped with a lock to secure against unauthorized use or tampering.***

(b) Within 30 days of temporary closure, the owner shall ~~notify~~ ***submit a new registration form to*** the ~~division in writing~~ ***department indicating*** that the requirements of this section for temporary closure of the system have been met.

(c) ~~A~~ ***Any portion of a*** single wall underground storage system without secondary containment and leak monitoring which has been temporarily closed for more than 12 months shall be permanently closed ***in accordance with Env-Wm 1401.18*** within 30 days~~. in accordance with Env-Wm 1401.18.~~

(d) A single wall underground storage tank ~~system~~ without secondary containment and leak monitoring, which has been temporarily closed for less than 12 months***, shall not be placed back into service nor shall a regulated substance be introduced into the system until the owner complies with and certifies to the department that the system is in compliance*** ~~may be placed back into service once the system has complied~~ with Env-Wm 1401.04, Env-Wm 1401.07, Env-Wm 1401.10, Env-Wm 1401.25, Env-Wm 1401.29, Env-Wm 1401.30, Env-Wm 1401.32, and Env-1401.33 ***and Env-Wm 1404 requirements***.

(e) A double wall underground storage tank ***system*** with secondary containment and leak monitoring, which has been temporarily closed for more than 90 days, shall not be placed back into service nor shall a regulated substance be introduced into the system until the owner complies with and certifies to the ~~division~~ ***department*** that the system is in compliance with Env-Wm 1401.04, Env-Wm 1401.07, Env-Wm 1401.10, Env**-**Wm 1401.25, Env-Wm 1401.26, Env-Wm 1401.27, Env-Wm 1401.32, and Env-Wm 1401.33.

(f) Systems with cathodic protection that are temporarily closed shall comply with Env-Wm 1401.32 (c) and Env- Wm 1401.33.

Env-Wm 1401.18 Permanent Closure.

(a) ~~Registered steel~~ ***With the exception of vent piping, all regulated metal*** underground storage ***tank*** systems without corrosion protection shall be permanently closed***.*** ~~on or before 25 years after the date of installation.~~ When the date of installation is unknown, the system shall have been permanently closed by October 1, 1995.

(b) All hazardous substance underground storage systems without secondary containment and leak monitoring shall be closed by December 22, 1998.

(~~b~~***c***) ~~All~~ ***With the exception of vent piping, any part of an*** existing single wall underground storage tank system~~s~~ ***that routinely contains regulated substance*** without secondary containment and leak monitoring shall be permanently closed by December 22, 2015.

(~~c~~***d***) When ~~a~~ ***an existing, previously unknown, underground storage*** tank system which is subject to Env-Wm 1401 is discovered, the owner shall register the facility in accordance with Env-Wm 1401.04***,*** and within 30 days from registration, close the tank system in accordance with Env-Ws 1401.18.

(~~d~~***e***) The owner shall notify the ~~division~~ ***department*** at least 30 days prior to any scheduled ***underground storage tank*** system ***permanent*** closure.

(~~e~~***f***) Any person permanently closing a system shall be certified in underground storage tank decommissioning by the International ~~Fire Code Institute (IFCI)~~ ***Code Council*** ~~within 6 months of the effective date of these rules~~. The certified tank remover shall also comply with safety and testing requirements such as ~~API 1604, API 1631, and API 2015~~ ***described in the American Petroleum Institute publications: RP 1604 Closure of Underground Storage Tanks, RP 1631 Interior Lining of Underground Storage Tanks, and STD 2015 Requirements for Safe Entry and Cleaning of Petroleum Storage Tanks***.

(~~f~~***g***) Permanent closure shall be accomplished as follows:

(1) All product, liquid and sludge shall be removed from the system(s) and disposed of in accordance with applicable state and federal rules;

(2) After all substances have been removed from the system(s) all piping shall be disconnected and removed to the greatest extent possible or permanently capped or plugged;

(3) The system shall be tested for hazardous or explosive vapors and rendered vapor free or inerted of such vapors;

(4) The system shall be removed;

(5) If removal of an underground storage tank system would serve to undermine the integrity of an overlying structure(s), or compromise the structural integrity of an adjacent underground storage tank, then the underground storage tank may be permanently closed in placed;

(6) A tank that is closed in place shall be filled to capacity, including all voids within each tank, with a solid inert material;

(7) An assessment shall be performed to determine if any contamination is present using one of the following sampling methods:

a. Test pits shall be excavated in the immediate vicinity of the system, and representative soil and, when encountered, groundwater samples shall be obtained;

b. Soil and, when encountered, groundwater samples shall be obtained from the excavation resulting from the removal of the system;

c. Existing release detection devices or subsurface monitoring locations shall be sampled;

d. For tanks which will be closed in-place, soil and, when encountered, groundwater samples shall be obtained at representative locations from beneath the tank and around all system piping; or

e. Soil and groundwater samples shall also be taken at locations adjacent to the system piping;

(8) The assessment shall be conducted in accordance with the department's Underground Storage Tank Closure Sampling & Reporting Guideline and Env-Wm 1403.

(~~8~~***9***) The excavation where the ***underground storage*** tank~~s~~ ***systems*** were located shall be screened for the presence of contamination, and samples shall be collected and shall be submitted to a New Hampshire certified laboratory for analysis, as follows:

a. Field screening of samples shall include visual and olfactory observation and headspace analysis performed with equipment such as a portable organic vapor meter (OVM) or portable gas chromatograph (GC); and

b. Laboratory analysis of samples shall include tests for constituents of those substances stored in the system~~; and~~**.**

(~~9~~***10***) A closure report containing results performed under ~~(7) and (8)~~ ***(7), (8) and (9)***, above and the laboratory analysis of samples performed under (8), above shall be submitted to the ~~division~~ ***department*** within 30 days of the samples being taken.

(~~g~~***h***) If soil or groundwater contamination from a regulated substance is detected by observation or analysis during closure of an underground storage system, any responsible party or other person shall immediately notify the ~~division~~ ***department*** in accordance with RSA 146-A:5, II.

(~~h~~***i***) The excavation shall not be backfilled, nor shall the closed tank be removed from the

site until the ~~division~~ ***department*** has inspected the site. If the ~~division~~ ***department*** is unable to inspect the site within 7 days, the ~~division~~ ***department*** shall grant permission for a consultant or other person knowledgeable in site assessments for contamination to inspect the site. When such permission is granted, the person inspecting the site shall submit a report to the ~~division~~ ***department***. The report shall contain a detailed account of inspection of soil and groundwater in the vicinity of the tank and piping, and of an inspection of the closed tank for evidence of corrosion and leakage, and be submitted within 30 days of such inspection.

~~(i) Underground storage systems which have not been permanently closed shall be subject to all requirements of Env-Wm 1401.~~

(~~i~~***j***) Documents pertaining to the closure of the tank or system, including contractor's invoices, manifests for disposal of materials, testing and analytical reports, and any other documents generated from the closure shall be kept by the owner for 3 years. These documents shall be transferred to the new owner at the time of a transfer of facility ownership.

Env-Wm 1401.19 Prohibition Against Reusing Tanks.

(a) As specified in RSA 146-C:8:

(1) Underground storage tanks ~~which~~ ***that*** have been removed ~~that~~ ***and*** do not meet the ~~standards for new tanks~~ ***requirements of Env-Wm 1401.21*** shall not be reused as underground storage tanks for regulated substances.

(2) ~~A~~ ***An underground storage*** tank once used for regulated substances shall not be reused to store food products or ~~potable~~ water.

(b) All double-wall tanks ~~which~~ ***that*** have been removed shall be recertified by the tank manufacturer and shall comply with Env-Wm 1401.21 regarding tank standards for new underground storage systems prior to reuse as underground storage tanks for regulated substances.

Env-Wm 1401.20 Requirements for Approval of Underground Storage Systems.

(a) At least 90 days prior to commencing construction or installation of a new or replacement underground storage system***,*** or a substantial modification of an underground storage system, the owner shall submit plans***, a completed application provided by the department,*** and specifications as required by RSA 146-C:7, I with the fee required by RSA 146-C:7, I-a to the ~~division~~ ***department***. The plans shall be prepared and stamped by a registered professional engineer, licensed to practice in the state of New Hampshire.

(b) Within 90 days of submission of plans and specifications, the ~~division~~ ***department*** shall approve plans ~~which~~ ***that*** demonstrate compliance with the requirements of these rules, or issue a notice of incompleteness or disapproval for plans ~~which~~ ***that*** do not demonstrate compliance with these rules.

(c) As specified in RSA 146-C:7, II, an owner shall not cause or allow a change which is

not in accordance with the approved plans and all terms and conditions of the ~~division's~~ ***department's*** approval.

(d) An approval granted for construction or installation of a corrosion prevention system***,*** or a new or replacement underground storage system, or a substantial modification of an underground storage system shall be valid for one year from the date of issuance. If construction of the installation is not completed within one year, the approval shall be void.

~~(e) An approval to line a tank in accordance with Env-Wm 1401.36 shall be valid for 6 months from the date of issuance. If construction of the liner is not completed within 6 months, the approval shall be void.~~

Env-Wm 1401.21 Tank Standards for New Underground Storage Systems.

(a) Pursuant to 40 CFR 280.20(a)(1), all glass-fiber-reinforced plastic underground storage tanks designed for storing regulated substances shall be manufactured in accordance with:

(1) Standards of Underwriters Laboratories~~,~~ Inc., UL 1316 ***Standard for Glass-Fiber-Reinforced Plastic Underground Storage Tanks for Petroleum Products, Alcohols, and Alcohol-Gasoline Mixtures***; or

(2) Underwriters Laboratories***'*** of Canada, ~~CANA-S6l5-M83~~ ***ULC-S615-1998, Underground Reinforced Plastic Tanks***.

(b) All double-wall steel underground storage tanks designed for storing regulated substances shall be manufactured with outer jackets of a minimum of 10 gauge in thickness ~~or~~ ***and*** in accordance with Underwriters Laboratories ***Inc.,*** Standard UL 58 ***Standard for Steel Underground Tanks for Flammable and Combustible Liquids***.

(c) All composite underground storage tanks designed for storing regulated substances shall be manufactured in accordance with Underwriters Laboratories ***Inc.*** Standard 1746 ***Standard for External Corrosion Protection Systems for Steel Underground Storage Tanks,*** ~~or the Association for Composite Tanks~~ ***Steel Tank Institute Specifications,*** ACT-100 ***External Protection of Composite Steel Underground Storage Tanks, or ACT 100-U External Corrosion Protection of Composite Steel Underground Storage Tanks***.

(d) All underground storage tanks designed for storing regulated substances and constructed of steel shall be manufactured in accordance with one of the following standards:

(1) Underwriters***'*** Laboratories of Canada, ~~Inc.~~ Standard ~~ULC-603, Standard for Protected Steel~~ ***CAN/ULC-S603-2000*** Underground ***Steel*** Tanks ~~for Flammable and Combustible Liquids~~; or

(2) Underwriters Laboratories, Inc.~~,~~ ~~USA~~ ***Standard~~,~~*** UL 58, Standard for Steel Underground Tanks for Flammable and Combustible Liquids; or

(3) Code for Unfired Pressure Vessels; Section VIII, Division I***,*** of the ~~ASME~~ ***American Society of Mechanical Engineers*** Boiler and Pressure Vessel Code.

(e) All jacketed underground storage tanks designed for storing regulated substances shall be manufactured in accordance with Underwriters Laboratories ***Inc.*** Standard UL 1746***,*** Part III ***Standard for External Corrosion Protection Systems for Steel Underground Storage Tanks*** or Underwriters***'*** Laboratories of Canada ~~ULC-S-603.1~~ ***ORD-C58.10-1992, Underground Jacketed Steel Tanks***.

(f) All tanks shall be provided with secondary containment ~~which~~ ***that*** shall enclose 360 degrees of the inner tank.

~~(g) A concrete vault shall be used for secondary containment of a single wall tank designed for storing regulated substances only if the tank was manufactured in accordance with Underwriter Laboratories Standard UL 58 or Env-Wm 1401.21(a) standards.~~

(~~h~~***g***) The secondary containment wall or envelope shall not be in contact with the inner wall such that a leak of the inner tank would not be detected due to restriction of product flow to the monitoring sump.

(~~i~~***h***) No alterations of any kind shall be made to the tank without the tank manufacturer's written approval.

(~~j~~***i***) All new tanks shall have a wear plate constructed of steel or glass fiber reinforced plastic installed under each tank opening covering an area of at least l44 square inches for purposes of protecting the tank wall from abrasion or puncture.

(~~k~~***j***) New underground storage tanks shall bear a stencil, label or plate ~~which~~ ***that*** provides the following information:

(1) The standard of design by which the tank was manufactured;

(2) The year in which the tank was manufactured;

(3) The dimensions and capacity of the tank; and

(4) The name of the manufacturer.

(~~l~~***k***) A certificate which shows all of the information required by (k)***,*** above and which also shows the date of installation and the regulated substances and percentages by volume of any additives which may be stored permanently and compatibly within, shall be displayed in such a way as to be visible to a ~~division~~ ***department*** inspector and permanently affixed on the facility premises.

(~~m~~***l***) Documents or copies of documents describing manufacturer's warranties, equipment items, contractor, equipment maintenance, repairs or testing, and all other information pertinent to the tank installation and system components shall be kept at the facility for the life of the system(s).

These records shall be transferred to the new owner at the time of a transfer of facility ownership.

(~~n~~***m***) The regulated substance stored shall be compatible with the interior lining or wall of the tank and all components, gaskets, and sealants that will be in contact with the stored substance. If the regulated substance stored is changed to a regulated substance that is not listed by the manufacturer as a substance that is compatible with the tank, a written confirmation from the manufacturer shall be obtained certifying the compatibility of the liquid with the system, prior to the change.

Env-Wm 1401.22 Piping Standards for New Underground Storage Systems

(a) All new underground pipes, fittings, and connections shall be constructed of fiberglass-reinforced epoxy, ~~thermo-plastic~~ ***thermoplastic*** material extrusions, ~~black iron, stainless~~ steel~~,~~ or copper ***and shall comply with the American Society of Mechanical Engineers, ASME Code for Pressure Piping, B31***.

(b) Fiberglass-reinforced epoxy piping shall meet ASTM Specification D-2996-~~71~~***01***, Standard Specification for Filament-Wound ~~RTRP~~ ***"Fiberglass" (Glass-Fiber-Reinforced Thermosetting Resin Pipe)***, Underwriters ~~Laboratory~~ ***Laboratories Inc.*** Subject 971***,*** Standard for Non~~-~~ Metallic Underground Piping ***for Flammable Liquids*** or Underwriters***'*** Laboratories of Canada Guide ~~ULC-107~~ ***ORD-C107.7-1993***, ~~"~~Glass~~-~~ ~~Fiber~~ ***Fibre*** Reinforced Plastic Pipe ***and*** Fittings ~~for Flammable Liquids.~~" Ultimate sheer strength of adhesive and curing agent shall be in compliance with ASTM D-2517-~~66T~~ ***00e1, Standard Specification for Reinforced Epoxy Resin Gas Pressure Pipe and Fittings***, as approved and supplied by manufacturer.

(c) Thermoplastic extrusion flexible piping shall meet Underwriters Laboratories ***Inc. Subject 971*** Standard for Non-Metallic Underground Piping for Flammable Liquids~~, Subject 971~~.

(d) Steel ~~or iron~~ primary product piping shall be Schedule 40 or heavier.

(e) Except when cathodic protection is provided by impressed current, underground metal piping systems shall have di-electric bushings installed to electrically isolate the piping system from the tank and the dispenser, or other end-use point, and at any change in the metal type, such as at flexible connectors.

(f) Piping systems shall provide flexibility for movement at the tank end, dispenser end, and at piping direction changes to relieve stress.

(g) When metal pipe is totally isolated from water and/or soil or other backfill material via non-metallic secondary containment, cathodic protection of the piping shall not be required.

(h) All new underground piping systems shall be designed, constructed, and installed with access and isolation points to permit independent pressure testing of the tank and piping without the need for excavation.

(i) Pressure and temperature limitations shall meet ~~ANSI B31, American National~~

~~Standard~~ ***American Society of Mechanical Engineers, ASME*** Code for Pressure Piping ***B31*** or the manufacturer's requirements and recommendations.

(j) The piping system and all components, gaskets, sealants that will be in contact with the stored substance shall be compatible with the stored substance.

Env-Wm 1401.23 Secondary Containment for New Tanks.

~~(a) Secondary containment shall be provided for all new tanks.~~

~~(b) A double-wall tank that meets applicable requirements of Env-Wm 1401.21 shall satisfy the requirements of this section for tank secondary containment.~~

~~(c) A concrete vault used for secondary containment of a single wall tank as specified in Env-Wm 1401.21(g) shall:~~

~~(1) Be watertight and impervious to leakage of regulated substances;~~

~~(2) Be able to withstand chemical deterioration and structural stresses from internal and external causes;~~

~~(3) Be a continuous structure;~~

~~(4) Have no drain connections or other entries or openings through the vault, except as provided in (8), below;~~

~~(5) Be constructed of continuously poured reinforced concrete with chemical resistant water stops at any construction joint;~~

~~(6) Have reinforced top slab(s);~~

~~(7)Be sealed on the inside with a material compatible with the stored product, or otherwise designed to make the vault impervious to leakage of the stored liquid or intrusion of groundwater;~~

~~(8) Have only top openings, solely for tank entry manholes, piping, or for monitoring and pumping of liquid from the vault; and~~

~~(9) Be sealed around all penetrations or otherwise designed to prevent intrusion of precipitation or surface runoff.~~

~~(d) If a concrete vault is used for secondary containment, the tank shall be encased or bedded in the vault in accordance with the manufacturer's requirements.~~

(~~e~~***a***) All secondary containment access ports shall be ~~clearly marked or labeled~~ ***installed to permit access without the need for excavation*** and shall be ~~secured~~ ***protected*** against unauthorized

access and tampering.

Env-Wm 1401.24 Secondary Containment for New Piping ***Systems***.

(a) All ~~new~~ underground storage piping ***systems*** ~~which~~ ***that*** routinely contain~~s~~ regulated substances shall have secondary containment by utilizing double-wall piping**.** ~~or a piping trench liner system~~

(b) Piping systems shall continuously slope ***at a minimum of 1/8 inch per foot*** to direct any leakage from the primary piping to a liquid-tight ~~collection~~ ***piping*** sump with ***a piping*** sump sensor. ~~A collection~~ ***The piping*** sump shall be ~~physically located~~ ***installed*** at each tank.

(c) A liquid-tight dispenser sump***s equipped with a sump sensor*** shall be installed directly beneath each dispenser to contain ~~discharges~~ ***and detect liquids***. ***Dispenser sumps shall be installed to allow any liquid collected to flow into the secondary containment piping system into the piping sump.***

~~(d) Piping trench liner systems for single wall piping shall include monitoring sumps installed in accordance with the manufacturer's requirements.~~

~~(e) The submersible pump head of all new pressurized piping systems shall be surrounded by a containment sump.~~

(f) All remote fill pipes shall comply with (a)~~, (b)~~ and (~~c~~***b***)**,** above, Env-Wm 1401.25 and Env- Wm 1401.27 (a) and (~~d~~***c***). ~~Vertical fill pipes shall comply with Env-Wm 1401.25(c).~~

(~~g~~***d***) Piping systems installed for the purpose of siphoning regulated substances shall be equipped with a liquid-tight ~~tank~~ ***piping*** sump and ***piping*** sump sensor at all interconnected tanks. ~~The piping system shall comply with this section.~~

(e) All piping and dispenser sumps shall be maintained free of liquid and debris at all times.

(f) All piping and dispenser sumps shall be liquid-tight to contain liquids and shall be installed to prevent the intrusion of groundwater or surface water runoff.

(g) All piping and dispenser sumps shall be equipped with liquid-tight penetration fittings for all sump entries.

(h) All piping and dispenser sump sensors shall be installed to respond to small accumulations of liquids within the sumps. The sensors shall be installed in accordance with the manufacturer's requirements for installation.

Env-Wm 1401.25 Spill Containment and Overfill Protection.

(a) All underground storage tanks shall be equipped with spill containment and overfill protection devices.

(b) Spill containment equipment shall prevent the release of product to the environment when a transfer hose is detached from a fill or transfer pipe**.**

(c) All spill containment equipment installed on an existing or new underground storage tank system shall ~~have a minimum liquid capacity of 5 gallons.~~***:***

(1) Have a minimum liquid capacity of 5 gallons;

(2) Be installed to prevent product from entering the backfill surrounding the spill containment equipment; and

(3) Be installed in accordance with the manufacturer's requirements and be maintained in good working order to perform their original design function.

(d) Spill containment equipment shall be maintained free of liquid and debris at all times.

(e) Spill containment equipment installed with drain valves on underground storage tank systems that store gasoline shall have the valve replaced annually or permanently sealed.

(f) All spill containment equipment installed after the effective date of these rules shall be tested for tightness within 30 days from installation and every 3 years thereafter using the manufacturer's requirements or nationally recognized industry codes of practice. The person performing the test shall certify and submit the passing test results to the owner within 30 days of the test.

(g) Existing spill containment equipment shall be tested for tightness in accordance with the manufacturer's requirements or nationally recognized industry codes of practice within 3 years of the effective dates of these rules and every 3 years there after. The person performing the test shall certify and submit the passing test result to the owner within 30 days of the test.

(~~d~~***h***) ~~The~~ ***A primary*** overfill protection ~~equipment :~~ ***device shall be installed to restrict or stop the flow of a regulated substance during a delivery before the tank reaches full capacity so that none of the fittings located on the top of the tank are exposed to the regulated substance due to overfilling.***

(i) The primary overfill protection device installed on an existing or new underground storage tank system:

(1) Shall alert the transfer operator when the tank is no more than 90% full by restricting the flow into the tank or by triggering high level ***visual and*** audible alarm; or

(2) When gravity filling a tank, shall alert the transfer operator 30 minutes prior to overfilling by restricting flow to an ultimate rate of 5 gallons per minute; or

(3) Shall automatically ***and completely*** shut off flow into the tank when the tank is no more than 95% full.

(j) All new and replacement primary overfill protection devices shall be installed to allow access for annual inspection of proper operation.

(k) Underground storage tank systems utilizing suction piping and an air eliminator shall be equipped with a high level visual and audible alarm or a device that automatically and completely shuts off flow into the tank, as specified in (i) above.

(l) Visual and audible overfill alarms shall be clearly labeled as a tank overfill alarm and shall be clearly visible to the transfer operator.

(m) A tank that receives a delivery other than by gravity flow shall only be equipped with a high level visual and audible overfill alarm.

(n) A tank that receives delivery of regulated substance of less than 25 gallons at one time shall be equipped with a high level visual and audible overfill alarm.

(~~e~~***o***) All gauges, alarms, or automatic or mechanical devices associated with ~~spill containment and~~ overfill protection shall be ***compatible with the delivery procedures and installed in accordance with the manufacturer's requirements and*** maintained in good working order to perform their original design function.

Env-Wm 1401.26 Leak Monitoring for New Tanks.

(a) Leak monitoring shall be installed and continuously operated for all new tanks.

(b) Double-wall tanks shall have continuous monitoring of the interstitial space for both the regulated substance and water.

(c) ~~Single wall tanks shall have continuous monitoring of the annular space between the tank and the secondary containment structure for both the regulated substance and water.~~ ***The sensors associated with leak monitoring for new and existing tanks shall be installed in accordance with the manufacturer's requirements for installation and maintained in good working order to perform their original design function.***

(d) The interstitial space shall be free of debris, water and the regulated substance at all times.

Env-Wm 1401.27 Leak Monitoring for New Underground Piping Systems.

(a) ~~New u~~***U***nderground piping systems shall be equipped with ***a*** leak monitoring ***system***.

(b) A UL-listed line leak detector shall be employed ***on pressurized piping systems,*** which shall be capable of detecting a line leakage rate of 3 gallons per hour at 10 pounds per square inch, and shall shut-off or restrict product flow if the leakage rate is exceeded. ***The UL-listed line leak detector shall meet the requirements of 40 CFR 280.40(a)(3).***

~~(c) The owner shall test each automatic line leak detector annually to confirm that it is operating according to manufacturer's recommendations.~~

(~~d~~***c***) The interstitial space of the double wall piping or the annular space between the primary piping and the secondary containment system shall be continuously monitored to detect the presence of both water and the regulated substance.

(~~e~~***d***) The piping ~~collection~~ sump~~, and the submersible pump head containment sump~~ ***and dispenser sump*** shall each have a leak monitor ***sensor*** to detect the presence of ~~both~~ water and the regulated substance ~~or water and vapors of the regulated substance.~~**.**

Env-Wm 1401.28 Installation of New Underground Storage Systems.

(a) Any person installing a tank or individual system components shall be certified ***for underground storage tank installation and retrofitting*** by the ~~IFCI,~~ ***International Code Council (ICC).*** ~~within 6 months of the effective date of these rules and~~ ***The*** certified ***tank installer shall be*** ~~as a~~ qualified ~~installer~~ by the ***equipment*** manufacturer ~~and~~ ***for every component of the system.*** ~~have~~ ***The certified tank installer shall have*** an understanding of the national underground storage tank ***regulations*** and industry codes ***of practice***. Installation items not included in the manufacturer's requirements shall be performed according to ~~PEI~~ ***Petroleum Equipment Institute*** RP 100~~-94~~ ***UST Installation, Recommended Practices for Installation of Underground Liquid Storage Systems,*** ~~API~~ ***American Petroleum Institute API*** 1615***, Installation of Underground Petroleum Storage Tanks*** and API 1632 ***Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems***. The person shall also comply with safety and testing requirements according to NFPA 30 ***Flammable and Combustible Liquids Code, NFPA 30A Automotive and Marine Service Station Code*** and ***National Fire Protection*** NFPA *329* ***Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases***.

(b) The ~~person installing the new primary underground product piping~~ ***certified tank installer*** shall perform a piping pressure test ***of the primary piping, secondary containment piping and vent piping*** to determine tightness.

(c) The ~~person installing the piping~~ ***certified tank installer*** shall perform the piping pressure test ***of the primary piping and secondary containment piping*** in accordance with ~~one of the following~~ ***the manufacturer's test requirements***~~:~~**.**

~~(1) The test requirements specified in NFPA 30; or~~

~~(2) The piping manufacturer's requirements.~~

(d) When no manufacturer's test requirements are specified for the primary piping, the certified tank installer shall perform the piping pressure test in accordance with the American Petroleum Institute Recommended Practice 1615.

(~~d~~***e***) ~~The piping installer shall certify the results of (c), above and file these results with the division and the owner at the time of backfill inspection of the system.~~ ***The certified tank installer shall pressure test the secondary containment piping in accordance with the manufacturer's test requirements before the backfill process begins and maintain the required pressure during the backfill process and for a period of two hours after the backfill process has been completed.***

~~(e) The person installing the new secondary underground containment piping shall perform a piping pressure test to determine tightness.~~

~~(f) The person installing the new secondary underground containment piping shall perform the piping pressure testin accordance with the manufacturer's requirements.~~

(~~g~~***f***) When no manufacturer's test requirements are specified, ~~the person installing the new secondary underground containment piping~~ ***for the secondary containment piping, the certified tank installer*** shall:

(1) Pressurize ~~the~~ flexible secondary containment piping at 5 psi ~~for a duration of 10 minutes; or~~ ***and maintain the pressure for a minimum period of 10 minutes before the backfill process begins and after the backfill process has been completed. The piping shall be continuously pressurized at the required test pressure throughout the backfill process.***

(2) Pressurize ~~the~~ nonflexible secondary containment piping at 10 psi ~~for a duration of 10 minutes;~~ ***and maintain the pressure for a minimum period of 10 minutes before the backfill process begins and after the backfill process has been completed. The piping shall be continuously pressurized at the required test pressure throughout the backfill process.***

~~(3) Use test gauges in conjunction with soaping all joints and connections for the duration of the test.~~

(g) Appropriate test gauges shall be used in conjunction with soaping all the joints and connections for the duration of the test.

(h) The ~~piping~~ ***certified tank*** installer shall certify ***and file*** the results of (c)***, above*** ~~or (g) above and file these results~~ ***before the piping system is backfilled,*** with the ~~division~~ ***department*** and the owner at the time of backfill inspection of the system.

(i) The certified tank installer shall certify and file the results of (e) and (f), above with the facility owner within 30 days of the test.

(j) All sumps shall be tested for tightness using either a hydrostatic test or a pneumatic test as defined in Env-Wm 1401.03(o) and (ad). The test shall be performed after all penetrations into the sump have been completed. The hydrostatic test shall be performed at a level that that is within one inch of the top of the sump or 12 inches above the highest penetration or seam of the sump for a period of 24 hours with no loss of liquid. A pneumatic test shall be performed at a pressure and duration required by the manufacturer of the testing equipment or industry accepted codes of practice. The test shall be performed and certified by the certified tank installer at the time of installation.

(~~i~~***k***) For steel tanks, the tank coating shall be thoroughly inspected, and any scratches, gouges, voids, or other discontinuities found in the coating shall be repaired according to the manufacturer's requirements prior to installation.

(~~j~~***l***) Whenever an existing tank is removed prior to the installation of a new tank, all applicable requirements of Env-Wm 1401.18 shall be met.

(~~k~~***m***) Whenever an existing tank is removed prior to the installation of a new tank, all system piping that does not meet the standards for new underground storage systems as specified in Env-Wm 1401.22 shall be ~~removed~~ ***closed in accordance with Env-Wm 1401.18***.

(~~l~~***n***) Whenever existing piping is replaced or extended the entire piping system shall meet the requirements of Env-Wm 1401.24.

(~~m~~***o***) Systems shall not be installed in areas subject to flooding over the top of the tank unless provisions are made to ensure that the tank shall not float and its contents shall not escape during a flood. For areas where the ground surface is below the 100 year flood elevation, special provisions for tank anchoring and product containment shall be provided to the ~~division~~ ***department*** with the plan required pursuant to Env-Wm 1401.20.

(~~n~~***p***) All new underground piping ***systems*** shall be laid out so as to minimize crossovers and, within construction limits, shall run in a compact trench to the point of use.

(~~o~~***q***) Piping ***systems*** shall slope continuously towards the tank at a minimum of 1/8 inch per foot.

(r) Vehicle dispensing areas shall be equipped with a concrete pad having positive limiting barriers shall be utilized at dispensing areas. The positive limiting barriers shall be constructed and maintained to contain a volume of at least 10-gallons for each dispenser. Dispensing nozzles shall not extend beyond positive limiting barriers.

(s) Secondary containment installed in conjunction with spill containment shall be equipped with sump sensors.

(~~p~~***t***) The owner shall notify the ~~division~~ ***department*** of the completion of the installation of a new or substantially modified system at least 5 days prior to backfilling the tank top and/or piping, to arrange for an inspection.

(q***u***) ~~Prior~~ ***24 hours prior*** to ~~final~~ ***an*** inspection by the ~~division~~ ***department***, the owner shall submit to the division ***department a letter*** prepared and stamped by ~~the design engineer or engineer of record~~ ***a registered professional engineer, licensed to practice in the state of New Hampshire,*** stating that the construction has been performed in accordance with the ~~division's~~ ***department's*** approved plans and specifications.

(v) When discrepancies of the approved plans and specifications are discovered, the owner shall submit to the department as-built record drawings prepared and stamped by a registered professional engineer, licensed to practice in the state of New Hampshire, showing actual installation conditions. The as-built record drawing(s) shall include the actual horizontal and vertical locations of the underground storage tank system, including field dimensions, elevations, and diagrams needed to depict the as-built conditions as approved by the department.

(~~r~~***w***) The ~~division~~ ***department*** shall inspect the system prior to backfilling. The owner shall correct any discrepancies discovered by the ~~division~~ ***department*** between the ~~completed~~ installation and approved plans within 30 days of the initial inspection and shall notify the ~~division~~ ***department*** to arrange a follow-up inspection.

(~~s~~***x***) The new system shall not be backfilled or placed into service until ***the department has performed an*** inspection ~~has been performed by the division~~.

(~~t~~***y***) At all new underground storage tank sites, the ***underground storage tank*** system shall be located no closer than the following:

(1) At least ~~400~~ ***500*** feet from a ~~large community or non-transient, non-community~~ ***public*** water ~~supply~~ system well; or

~~(2) At least 200 feet from a small community or non-transient, non-community water supply system well; or~~

(~~3~~***2***)At least ~~75~~ ***250*** feet from a private water supply well.

(~~u~~***z***) Whenever an underground storage tank system is replaced, an attempt shall be made to relocate the system such that any applicable water supply well protective separation distance as specified in (t) above is achieved.

(~~v~~***aa***) With the exception of marinas, no underground storage tank system at any new site shall be located closer than 75 feet from surface waters of the state.

(ab) Spill containment equipment shall be tested for tightness as required in Env-Wm 1401.25(f) and the results shall be submitted to the department at the time of inspection.

(ac) Bollards shall be installed around free standing vents to prevent damage.

(ad) Spill containment equipment shall be installed on all Stage I riser pipes.

(ae) Swivel adaptors shall be installed on all fill and Stage I riser pipes.

(af) All line leak detectors shall be tested in accordance with the manufacturer's requirements and the passing test results submitted to the department before product may be used for consumption.

(ag) Storm water runoff from underground storage facilities with the potential to contain contaminants of the regulated substance shall not be discharged to the subsurface.

(ah) Storm water shall not be directed to flow over any tank pad or dispensing pad to prevent the migration of regulated substances.

Env-Wm 1401.29 Release Detection for Tanks Without Secondary Containment and Leak Monitoring.

(a) With the exception of on-premise-use heating oil tanks that are otherwise subject to these rules, underground storage tanks without secondary containment and leak monitoring shall be equipped with release detection and be monitored for releases.

(b) Owners of underground storage tanks without secondary containment and leak monitoring shall conduct ~~annual tightness testing,~~ automatic tank gauging, groundwater monitoring, or soil gas vapor monitoring for release detection. ~~Prior to initiating release detection, the owner shall submit in writing to the division the release detection method chosen which demonstrates that the chosen release detection method meets the requirements of this section.~~ ***As of the effective date of these rules, the installation of groundwater monitoring wells or soil gas vapor monitoring wells shall not be an acceptable release detection method.***

(c) Owners of system(s) with no release detection shall perform a full system tightness test, pursuant to Env-Wm 1401.13~~,~~**.** ***The department may request that the owner perform*** ~~and~~ an assessment to determine if any contamination is present by obtaining soil and groundwater samples in the immediate vicinity of the system(s)***, in accordance with Env-Wm 1401.18(g).*** The owner shall submit to the ~~division~~ ***department*** results of the tightness test and assessment within 15 days of the completed work.

~~(d) When tightness testing is used for release detection, the tanks shall be tested at least annually in accordance with Env-Wm 1401.13. Tightness testing shall not be used as a release detection method after December 22, 1998.~~

(~~e~~***d***) When automatic tank gauging is used for release detection, the gauge shall provide at least one passing test in a 30 day period for tank leakage**.** ~~with a detection limit of at least 0.2 gallons per hour.~~ In-tank monitoring shall operate ***daily*** in a leak detection mode ~~for at least 2 hours during each 24 hour period~~ ***in accordance with the manufacturer's requirements***.

(e) The automatic tank gauge shall be capable of detecting at least a 0.2 gallon per hour

leak rate from any portion of the tank that routinely contains product.

(f) Automatic tank gauging equipment and devices shall be maintained in good working order at all times to continuously perform their original design function and shall be inspected and tested annually in accordance with the manufacturer's requirements for proper operation.

(g) The owner shall submit the automatic tank gauge test results on a form obtained from the department. The form shall be submitted to the department no later than 30 days after the date of the test.

(h) The automatic tank gauging test report shall include:

(1) Location and name of the facility;

(2) Facility registration number;

(3) Date of the test;

(4) Tester's name, company address and telephone number;

(5) Automatic tank gauging model number and manufacturer's name;

(6) Test results;

(7) Verification that the automatic tank gauging equipment is correctly programmed to notify the operator of an alarm; and

(8) Verification that the automatic tank gauging equipment is correctly programmed to perform in accordance with Env-Wm 1401.29(e), above.

(i) The tester who has conducted the test shall sign the following: "I hereby verify that the automatic tank gauging system was tested to conform with Env-Wm 1401.29(e) and that the equipment identified in this report is operating according to its original design function."

(j) Automatic tank gauge devices shall not be turned off or deactivated for more than 2 hours without prior notification by the operator to the department. Any malfunction shall be repaired within 15 working days. If the device(s) cannot be repaired within 15 days, the affected system(s) shall be temporarily closed until satisfactory repairs are made.

(k) All monitoring devices shall be conspicuously marked or labeled as being monitoring devices and shall be secured against vandalism and incidental damage.

(~~f~~***l***) An automatic tank gauging leak***, release*** or failure shall be indicated by a test result of greater than 0.2 gallons per hour.

(~~g~~***m***) The owner of an underground storage system shall report any automatic tank gauging failure to the ~~division~~ ***department*** immediately.

(~~h~~***n***) An automatic tank gauging ***test result*** failure shall be addressed as follows:

(1) The owner shall perform an investigation into the cause of the failure to determine if a release has occurred; and

(2) If a possible release of regulated substance from the system has occurred, the owner shall comply with all requirements of Env-Ws 412.

~~(i) Prior to installing groundwater or soil gas vapor monitoring wells for release detection, the owner shall submit plans to the division which demonstrate that the monitoring well installation complies with Env-Wm 1401.29 (j) and (p)**,** below.~~

~~(j) Owners of underground storage tanks without secondary containment and leak monitoring may use groundwater monitoring wells as a release detection method as long as the following conditions are met:~~

~~(1) The stored regulated substance is immiscible in water and have a specific gravity of less than one;~~

~~(2) The groundwater table is within 20 feet of the ground surface;~~

~~(3) The monitoring wells are installed to intercept the tank excavation zone;~~

~~(4) When the requirements of (3), above cannot be met, the monitoring wells are placed as close to the tank(s) as technically feasible and the well screen of the monitoring well shall completely intercept seasonal fluctuations in the water table;~~

~~(5) The hydraulic conductivity of the soil surrounding a monitoring well and between a monitoring well and the tank is greater than 0.01 centimeters per second;~~

~~(6) The slotted portion of the monitoring well casing is designed to prevent migration of natural soils or filter pack into the well but to allow entry of regulated substance on the water table into the well under both high and low grade-water conditions;~~

~~(7) Monitoring wells are sealed from the ground surface to the top of the filter pack; and~~

~~(8) Monitoring wells are clearly marked and secured to avoid unauthorized access and tampering.~~

(o) Existing monitoring wells shall be clearly marked and secured to avoid unauthorized access and tampering.

(~~k~~***p***) The owner shall monitor the ***existing*** groundwater monitoring wells for the presence of releases at least monthly.

(~~l~~***q***) The owner performing the monitoring shall monitor the ***existing*** wells in accordance with one of the following:

(1) By the use of a continuous monitoring device that shall detect the presence of ~~free-product~~ ***regulated substance*** or sheen on top of the groundwater in the monitoring wells; or

(2) By manual methods that shall be able to detect ~~free-product~~ ***regulated substance*** or sheen on top of the groundwater in the monitoring wells.

(~~m~~***r***) The owner shall sample each ***existing*** monitoring well at least annually and shall submit the collected groundwater samples to a New Hampshire-certified laboratory for analysis for the presence of regulated substance, and shall submit the test results to the ~~division~~ ***department*** within 30 days of the test.

(~~n~~***s***) The owner shall notify the ~~division~~ ***department*** within 24 hours whenever a regulated substance is detected by observation, a continuous detection device, or laboratory analysis of groundwater well samples.

(~~o~~***t***) ~~Groundwater~~ ***Existing*** monitoring wells shall not be used as a release detection method at facilities where releases have previously occurred or groundwater is contaminated with a regulated substance.

~~(p) Owners of underground storage tanks without secondary containment and leak monitoring may use soil gas vapor monitoring wells as a release detection method as long as the following conditions are met:~~

~~(1) The device or method for monitoring provides at least one monthly test for the presence of the regulated substance stored in the tank;~~

~~(2) The stored liquid or approved tracer additive is sufficiently volatile to provide a vapor level that is detectable by the monitoring device used;~~

~~(3) The measurement of vapors by the monitoring device is not rendered inoperative by the groundwater, rainfall, or soil moisture or other known interferences such that a release could go undetected for more than 30 days;~~
~~(4) The monitoring device is installed to intercept the tank excavation zone, or shall be placed as close to the tank as possible;~~

~~(5) The subsurface materials and conditions surrounding the monitoring device and between the device and tank, is sufficiently porous in their in-situ condition to readily allow diffusion of vapors from the tank to the device;~~

~~(6) The vapor monitor is designed and operated to detect any increase in concentration above background concentrations;~~

(u) The owner shall monitor existing soil gas vapor monitoring wells for the presence of releases at least monthly.

(~~7~~***v***)The owner shall notify the ~~division~~ ***department*** within 24 hours whenever vapor monitoring devices detect any increase in concentration above background concentrations~~; and~~**.**

~~(8) Monitoring wells installed for soil gas vapor monitoring shall meet the same requirements as wells installed for groundwater monitoring, except the screened interval need not intercept groundwater.~~

Env-Wm 1401.30 Release Detection for Piping.

(a) With the exception of on-premise-use heating oil systems that are otherwise subject to these rules, all pressurized piping without secondary containment and leak monitoring shall ~~be monitored~~ ***conduct annual tightness testing, groundwater monitoring, or soil gas vapor monitoring*** for releases ~~in accordance with (c), below~~ ***detection.*** ~~Prior to initiating release detection, owners shall submit in writing the release detection method to the division which demonstrates that the chosen release detection method meets the requirements of this section.~~ ***As of the effective date of these rules, the installation of groundwater monitoring wells or soil gas vapor monitoring wells shall not be an acceptable release detection method.***

(b) All pressurized piping shall be equipped with an automatic line leak detector which shall restrict or stop the flow of the stored substance and trigger an audible or visual alarm upon detecting a leak at a rate of 3 gallons per hour at a pressure of 10 pounds per square inch line pressure within one hour ***and shall meet the requirements of 40 CFR 280.40(a)(3)***. ~~Automatic line leak detectors shall be tested annually to confirm that they are operating according to manufacturer's recommendations. The test results shall be submitted by the owner to the division no later than 30 days after the date of the test.~~

(c) Automatic line leak detectors shall be tested annually in accordance with the manufacturer's requirements to confirm that they are operating in accordance with their designed function.

(d) The automatic line leak detector test report shall include:

(1) Location and name of the facility;

(2) Facility registration number;

(3) Date of the test;

(4) Testing company name, address, and telephone number;

(5) Testers name and signature;

(6) Test locations; and

(7) Test results.

(e) The line leak detection tester who has conducted the test shall sign the following: "I hereby verify that the automatic line leak detector(s) were tested to confirm that they are operating according to manufacturers' requirements."

(f) When an automatic line leak detector test is performed, the owner shall send the information specified in (d) and (e), above to the department no later than 30 days after the date of the test.

(g) The information required in (d) and (e) above, shall be recorded on a form obtained from the department.

(h) An automatic line leak detector failure shall be indicated by a leak rate of greater than 3 gallons per hour at a pressure of 10 pounds per square inch line pressure within one hour.

(i) The failed line leak detector shall be repaired or replaced immediately and shall meet the requirements of Env-Wm 1401.30(b). The affected piping system(s) shall be taken out of service until satisfactory repairs are made or the line leak detector is replaced.

~~(c) Release detection for systems with pressurized piping shall use one of the following:~~

~~(1) Groundwater monitoring in accordance with Env-Wm 1401.29(j);~~

~~(2) Soil vapor monitoring in accordance with Env-Wm 1401.29(p); or~~

(j) When existing groundwater monitoring is used the owner shall monitor the groundwater monitoring wells for the presence of releases at least monthly.

(k) The owner performing the monitoring shall monitor the wells in accordance with one of the following:

(1) By the use of a continuous monitoring device that shall detect the presence of regulated substance or sheen on top of the groundwater in the monitoring wells; or

(2) By manual methods that shall be able to detect regulated substance or sheen on top of the groundwater in the monitoring wells.

(l) The owner shall sample each existing monitoring well at least annually and shall submit the collected groundwater samples to a New Hampshire-certified laboratory for analysis for the presence of regulated substance, and shall submit the test results to the department within 30 days of the test.

(m) The owner shall notify the department within 24 hours whenever a regulated

substance is detected by observation, a continuous detection device, or laboratory analysis of groundwater well samples.

(n) When soil gas vapor monitoring is used the owner shall notify the department within 24 hours whenever vapor monitoring devices detect any increase in concentration above background concentrations.

~~(3) Annual line tightness testing in accordance with (d), below.~~

(~~d~~***o***) When annual line tightness testing is used, the owner shall submit test results to the ~~division~~ ***department no later than 30 days after the date of the test***. Pipe pressure tightness tests shall have a detection limit equivalent to 0.1 gallon per hour at 1.5 times operating pressure.

(~~e~~***p***) Release detection for systems with suction or atmospheric piping shall be one of the following:

(1) Performance of a line tightness test in accordance with (~~f~~***o***), ~~below~~ ***above*** once every 3 years;

(2) ~~Groundwater~~ ***Existing groundwater*** monitoring ***and soil vapor monitoring*** in accordance with ~~Env-Wm 1401.29(j); or~~ ***(j), (k), (l), (m) and (n) above.***

~~(3) Soil vapor monitoring in accordance with Env-Wm 1401.29(p).~~

(~~f~~***q***) When line tightness testing is used for suction or atmospheric piping, the owner shall submit test results to the ~~division~~ ***department***. Pipe pressure tightness test shall have a detection limit equivalent to 0.1 gallon per hour at 1.5 times operating pressure.

(~~g~~***r***) Release detection shall not be required for suction or atmospheric piping that is demonstrated, by ~~division~~ ***department*** inspection or by plans submitted by the owner, to be designed and constructed to meet the following standards:

(1) The ~~below grade~~ piping operates at ***atmospheric pressure or at*** less than atmospheric pressure;

(2) The ~~below grade~~ piping is continuously sloped so that the contents of the piping will drain back into the storage tank if the suction is released;

(3) No more than one check valve is included in each suction line; and

(4) The check valve is located directly below and as close as practical to the suction pump.

(~~h~~***s***) A tightness test failure shall be ***indicated by a test result of 0.10 gallon per hour or greater or an inconclusive test and shall be*** addressed as follows:

(1) The owner shall perform an investigation into the cause of the failure to determine

if a release has occurred ***in accordance with Env-Wm 1403***;

(2) The investigation into the cause of an initial test failure shall be completed within 7 days ~~and include the performance of a second confirming pipe tightness test~~;

(3) The owner shall submit a written report to the ~~division~~ ***department*** within 30 days of the failure which describes the work performed, the repairs made, and any other actions taken in response to the test failure; and

(4) Any piping system ~~which~~ ***that*** has been repaired shall be retested for tightness to confirm the effectiveness of the repairs.

(~~it~~***t***) When the cause of the failure is unknown or there is a possible release to the environment, the owner shall notify the ~~division~~ ***department*** within 24 hours of the occurrence in accordance with Env-~~Ws 412.02~~ ***Wm 1403***.

Env-Wm 1401.31 Operation of Leak Monitoring Equipment.

(a) Leak monitoring equipment and devices shall be maintained in good working order at all times to continuously perform their original design function and shall be tested annually for proper operation ~~in accordance with the manufacturer's requirements~~.

(b) The interstitial space or annular space for both tanks and piping shall be maintained free of debris, water, and the regulated substance at all times.

(c) The owner shall submit the annual leak monitor test results on a form obtained from the department. The form shall be submitted to the department no later than 30 days after the date of the test.

(d) The results of the leak monitor test shall include the following:

(1) Location and name of the facility;

(2) Facility registration number;

(3) Date of the test;

(4) Tester's name, company address, and telephone number;

(5) Leak monitor model number and manufacturer's name;

(6)Test results;

(7)Verification that the leak monitor console assignments are correctly programmed and labeled for all sensors;

(8) Verification that the tank and piping sensors for the secondary containment is positioned in accordance with the manufacturer's requirements;

(9) Verification that the brine level of the tank interstitial space is within the manufacturer's operating range;

(10) Confirmation that the secondary containment is free of debris, water, and regulated substance;

(11) Confirmation that all sensors were visually inspected and confirmed operational by manually simulating an alarm condition;

(12) Verification that all leak monitor console audible alarms are operational;

(13) Verification that all leak monitor console visual alarms are operational; and

(14) Verification that all secondary containment is continuously monitored.

(e) The tester who has conducted the test shall sign the following: "I hereby verify that the equipment identified in this document was tested for proper operation in performance of the original design function in accordance with the manufacturers' requirements. Attached to this form is information (If available, system set-up reports) necessary to verify that this information is correct."

(~~b~~***f***) Leak monitoring devices shall not be turned off or deactivated ~~at any time~~ ***for more than 2 hours*** without prior notification by the owner to the ~~division~~ ***department***. Any ~~malfunction~~ ***malfunctioning device*** shall be repaired ***and any alarm condition cleared and reset to normal operating mode*** within 15 working days. If the device(s) cannot be repaired ***and the alarm condition cleared and reset to normal operating mode*** within 15 days, the affected system(s) shall be temporarily closed until satisfactory repairs are made. ~~Any deactivation of a monitor shall be immediately reported to the division by the owner.~~

(~~c~~***g***) Leak monitors shall employ an audible alarm and visual indicator, and shall be so located as to be readily heard and seen by the operator or other personnel during normal working hours.

(~~d~~***h***) All monitoring devices shall be conspicuously marked or labeled as being monitoring devices and shall be secured against vandalism and incidental damage.

(i) All new and existing leak detection sensors shall be identified to correspond to the installed location and these designations shall be displayed in such a way as to be permanently affixed on the facility premises and visible to a department inspector.

(j) When a leak monitor indicates a possible leak, the owner shall perform an investigation into the cause of the indication to determine if a leak has occurred, in accordance with Env-Wm 1401.16.

Env-Wm 1401.32 Corrosion Protection for Steel Tanks.

(a) All new underground storage tanks shall be protected from corrosion. Corrosion protection for new tanks shall comply with 40 CFR 280.20(a).

(b) All existing steel underground storage tanks shall be protected from corrosion no later than December 22, 1998. Corrosion protection for existing steel tanks shall comply with 40 CFR 280.21(b)(2) or (3).

(c) All new and existing cathodic protection systems shall be equipped with an accessible test connection or monitor. ~~Sacrificial anode systems shall be tested within 6 months of installation and every 3 years thereafter by a qualified cathodic protection tester.~~ ***A qualified cathodic protection tester shall test sacrificial anode systems within 6 months of installation and every 3 years thereafter.***

(d) ~~Impressed current systems shall be tested within 6 months of installation and every 3 years thereafter by a qualified cathodic protection tester.~~ ***A qualified cathodic protection tester shall test impressed current systems within 6 months of installation and every 3 years thereafter.***

(e) ~~When a cathodic protection test is conducted, the information required for reporting~~ ***The*** results of the cathodic protection test shall include the following:

(1) Location and name of the facility;

(2) Facility ~~identification~~ ***registration*** number;

(3) Date of the test;

(4) Testing company name ***and telephone number***;

(5) Equipment used to conduct the test;

(6) Test locations; ~~and~~

(7) Test results~~.~~***; and***

(8) Tester's International Code Council or NACE certification number.

(f) The qualified cathodic protection tester who has conducted the test shall ~~agree to and~~ sign the following: "I hereby certify that I am a qualified cathodic protection tester who has an understanding of the principles and measurements of all common types of techniques used to prevent corrosion of a metal surface by making that surface the cathode of an electrochemical cell as applied to buried piping and tank systems."

(g) When a cathodic protection test is performed, the owner shall send the information specified in (e) and (f)**,** above to the ~~division~~ ***department*** no later than 30 days after the date of the

test.

(h) The information required in (e) and (f)**,** above shall be submitted on a form obtained from the ~~division~~ ***department***.

(i) A tank shall be considered cathodically protected when one of the following requirements is met:

(1) A negative cathodic potential of at least 850 mV with the cathodic protection applied, which shall be measured with respect to a saturated copper/copper sulfate reference electrode contacting the electrolyte. Voltage drops other than those across the structure/electrolyte boundary is considered valid interpretation of this voltage measurement; or

(2) A minimum of 100 mV of cathodic polarization. The formation or decay of polarization can be used to satisfy this criterion; or

(3) The requirements specified in NACE International approved criteria ~~(NACE)~~ Standard RP-0285-~~95~~ ***2002, Corrosion Control of Underground Storage Tank Systems by Cathodic Protection***.

(j) When a cathodic protection system cannot meet the requirements of (i)**,** above, a corrosion expert shall ***certify the*** repair ***of*** the cathodic protection system ***within 90 days of the original test failure*** or the underground storage tank system shall be permanently closed ***within 30 days of the original test failure***.

Env-Wm 1401.33 Corrosion Protection for Piping.

(a) All new metal piping used as secondary containment for piping that routinely contains regulated substances and is in contact with the soil or other backfill material shall be protected from corrosion. Corrosion protection for new piping shall comply with 40 CFR 280.20(b).

(b) All existing metal piping that routinely contains regulated substances and is in contact with the soil or other backfill material shall be protected from corrosion no later than December 22, 1998. Corrosion protection for existing metal piping shall comply with 40 CFR 280.21(c).

(c) All new metal vent piping shall be protected from corrosion.

(d) All new and existing cathodic protection systems shall be equipped with an accessible test connection or monitor. A qualified cathodic protection tester shall test sacrificial anode systems within 6 months of installation and every 3 years thereafter.

(e) The impressed current systems shall be tested by a qualified cathodic protection tester within 6 months of installation and every 3 years thereafter.

(f) When a cathodic protection test is conducted, the information required for reporting

the results of the cathodic protection test shall include the following:

(1) Location and name of the facility;

(2) Facility registration number;

(3) Date of the test;

(4) Testing company name and telephone number;

(5) Equipment used to conduct the test;

(6) Test locations;

(7) Test results; and

(8) Tester's International Code Council or NACE certification number.

(g) The qualified cathodic protection tester who has conducted the test shall sign the following: "I hereby certify that I am a qualified cathodic protection tester who has an understanding of the principles and measurements of all common types of techniques used to prevent corrosion of a metal surface by making that surface the cathode of an electrochemical cell as applied to buried piping and tank systems."

(h) When a cathodic protection test is performed, the owner shall send the information specified in (f) and (g), above to the department no later than 30 days after the date of the test.

(i) The information required in (f) and (g), above shall be submitted on a form obtained from the department.

(j) A piping system shall be considered cathodically protected when one of the following requirements is met:

(1) A negative cathodic potential of at least 850 mV with the cathodic protection applied, which shall be measured with respect to a saturated copper/copper sulfate reference electrode contacting the electrolyte. Voltage drops other than those across the structure/electrolyte boundary is considered valid interpretation of this voltage measurement; or

(2) A minimum of 100 mV of cathodic polarization. The formation or decay of polarization can be used to satisfy this criterion; or

(3) The requirements specified in NACE International approved criteria Standard RP0285-2002, Corrosion Control of Underground Storage Tank Systems by Cathodic Protection.

(k) When a cathodic protection system cannot meet the requirements of (j), above

the owner shall submit documentation to the department that the repair of the cathodic protection system was performed in accordance with Env-Wm 1401.34

Env-Wm 1401.34 ~~Submission of Corrosion Protection Plan~~ ***Repair of Corrosion Protection Systems*.**

(a) No alterations shall be made to an existing cathodic protection system.

(~~a~~***b***) ~~At least 90 days prior to installing corrosion protection for an unprotected underground storage system, the owner of underground storage system shall submit a corrosion protection plan for approval to the division.~~ ***When the method of cathodic protection for an existing system is changed, the owner shall submit a cathodic protection plan to the department for approval at least 90 days prior to installation of the cathodic protection system.*** The plan shall be prepared by a corrosion protection expert in accordance with Env-Wm 1401.20(b), (c), and (d).

(c) When an existing cathodic protection system is repaired by the installation of a similar method of cathodic protection, the owner of an underground storage tank system shall address a repair to an existing corrosion protection system as follows:

(1) No later than 30 days after the date of the corrosion protection test, submit to the department the test results as required by Env-Wm 1401.32 (e) and (f) on a form obtained from the department, and

(2) Submit to the department a report prepared and signed by a corrosion expert identifying the cause of the failure and the procedures required to repair the cathodic protection system.

(d) No later than 30 days following the repair to the cathodic protection system, the owner shall submit to the department the following:

(1) A record drawing of the repair;

(2) The information as required by Env-Wm 1401.32 (e) and (f) of the corrosion protection test on a form obtained from the department; and

(3) A report prepared and signed by a corrosion expert certifying the cathodic protection system repair was conducted under the direction of a corrosion expert and the repaired underground storage tank system has adequate cathodic protection.

(e) When a failed cathodic protection system is not repaired within 90 days of the cathodic protection test date, the owner shall permanently close the underground storage tank system in accordance with Env-Wm 1401.18.

Env-Wm 1401.35 Installation of New and Replacement Fueling Systems over Surface

Waters.

(a) Underground storage tank systems at fueling facilities dispensing fuels over water shall meet the requirements of these rules and ***National Fire Protection Association*** NFPA 30 ***Flammable and Combustible Liquids Code*** and NFPA 30A***, Automotive and Marine Service Stations Code***.

(b) Piping systems where tanks are at an elevation that produces a pressure due to gravity at the dispenser shall be equipped with an anti-siphon device installed adjacent to and downstream from a manually operated shutoff valve. The anti-siphon device and manual shutoff valve shall be located inside a liquid-tight collection sump at the tank.

(c) Piping systems shall have continuous secondary containment or be equipped with liquid-tight ~~collection~~ sumps at locations where ***continuous*** secondary containment is not possible.

(d) ~~Piping systems with~~ ***All*** liquid-tight ~~collection~~ sumps shall have a sump sensor.

(e) Piping systems shall be equipped with flexible secondarily contained piping between any floating structure and the shore.

(f) Piping systems shall be equipped with the readily accessible shutoff valve located on the shore, and as close to the shoreline as possible. The valve shall be installed adjacent to and upstream from the location employing flexible piping from a floating structure and the shore.

(g) Piping systems shall be protected from physical damage.

(h) Dispensing nozzles shall be automatic closing type without a device ~~which~~ ***that*** allows the dispensing nozzle to remain open.

(i) Piping shall not be ~~installed~~ in ***contact with*** surface water.

Env-Wm 1401.36 ~~Lining Steel Tanks~~ ***Testing of Existing Sumps, Secondary Containment Piping, Stage I and Stage II Piping*** .

~~(a) A steel underground storage tank which is leaking shall not be lined to be repaired.~~

~~(b) A steel underground storage tank may have an interior liner installed no more than once during the life of the tank, subject to the following conditions:~~

~~(1) The tank has passed a tightness test conducted in accordance with Env-Wm 1401.13 within 30 days prior to submittal of the application and plans for the installation of the liner;~~

~~(2) Inventory records have been maintained for the preceding 3 years and do not show a loss of liquid, or an assessment is performed which indicates that no soil or groundwater contamination is present; and~~

~~(3) The liner material is compatible with the regulated substance stored.~~

~~(c) Steel tank lining shall be accomplished in accordance with American Petroleum Institute Publication 1631, "Recommended Practices for the Interior Lining of Existing Steel Underground Storage Tanks" and NLPA 631 "Standards for Relining Tanks."~~

~~(d) The owner shall submit plans and specifications for approval for the lining installation to the division in accordance with Env-Wm 1401.20.~~

~~(e) The system shall be tightness tested in accordance with Env-Wm 1401.13 within 30 days after lining of the tank is completed.~~

~~(f) The lining shall be tested 10 years from the date of installation, then every 5 years thereafter for structural soundness, voids, detachment from the metal tank, and other defects. If at any time the lining is determined not to be functioning as originally intended and installed, the tank shall be permanently closed.~~

(a) All existing piping sumps shall be tested for tightness within 3 years of the effective date of these rules and every 3 years thereafter.

(b) A hydrostatic test as described in Env-Wm 1401.28(j) or an equivalent testing procedure recommended by a nationally recognized industry code of practice or a manufacturer's requirements for tightness testing sumps shall be used to determine a leak or failure.

(c) When a tightness test for a sump is performed, the owner shall submit a tightness test report to the department no later than 30 days after the date of the test.

(d) The tightness test report shall include:

(1) The facility name and registration number;

(2) The test company name, address, and telephone number;

(3) The name of the test technician;

(4) The method of testing and a copy of the field technician's testing records;

(5) Any other information to accurately identify the tested components;

(6) A description of any piping, fittings, or connections that were tightened or repaired;

(7) The date of last calibration and maintenance of the tightness testing equipment, if applicable; and

(8) For tests other than the hydrostatic test specified in Env-Wm 1401.28(j), the test

duration time.

(e) The technician performing the tightness test shall sign a test report that certifies:

(1) The validity, method, and accuracy of the test;

(2) That the test complies with requirements of these rules; and

(3) The tester is qualified to perform the test.

(f) A sump tightness test failure shall be determined by as specified by the test equipment manufacturer.

(g) With the exception of on-premise-use heating oil piping systems that are otherwise subject to these rules, all existing secondary containment piping shall be tested for tightness within 6 months of the effective date of these rules and every 3 years thereafter.

(h) Stage I and stage II piping shall be tested for tightness within 6 months of the effective date of these rules and every 3 years thereafter.

(i) When no manufacturer's test requirements are specified, the person testing the existing secondary containment piping shall:

(1) Pressurize flexible secondary containment piping at 5 psi and maintain the pressure for a minimum period of two hours.

(2) Pressurize nonflexible secondary containment piping at 10 psi and maintain the pressure for a minimum period of two hours.

(3) Use appropriate test gauges in conjunction with soaping all joints and connections for the duration of the test.

(j) When a tightness test of the secondary containment piping, stage I, and Stage II piping is performed, the owner shall send a tightness test report including the information in (f) and (d), above to the department no later than 30 days after the date of the test.

(k) When the secondary containment piping, stage I, or Stage II piping fails a tightness test, the owner shall close the piping system within 30 days of the date of the test.

(l) An owner shall conduct a tightness test within 30 days of the required test date as specified in (g) and (h), above or the piping system shall be closed no later than 30 days after the required test date.

Env-Wm 1401.37 Repair of ~~Glass-Fiber-Reinforced Plastic~~ Tanks.

~~(a) An underground glass-fiber-reinforced plastic tank shall be subject to the following conditions:~~

~~(1) The tank has passed a precision tightness test conducted in accordance with Env-Wm 1401.13; is in compliance with release detection or leak monitoring requirements; and inventory records for the preceding 3 years indicate no loss of stored liquid, or an assessment is performed which indicates that no soil or groundwater contamination is present; and.~~

~~(b) Repairs shall be conducted in accordance with FiberglassTank and Pipe Institute Standards T-95-02~~

~~(c) Following completion of the repair of the tank but before backfilling, the system shall be tightness tested in accordance with Env-Wm 1401.13.~~

(a) A liner shall not be installed to repair an underground storage tank.

(b) An underground storage tank that discharges, leaks, spills, or releases a regulated substance to the environment shall be permanently closed in accordance with Env-Wm 1401.18.

(c) An underground storage tank may be repaired subject to the following conditions:

(1) Release detection records and inventory records for the preceding 3 years indicate no loss of stored liquid; or

(2) Leak monitoring records for the preceding 3 years indicate no loss of stored liquid; or

(3) An assessment performed in accordance with Env-Ws 412 which indicates that no soil or groundwater contamination is present.

(d) Prior to repairing an underground storage tank the owner shall provide a report to the department regarding the procedures on how the repair will be accomplished; and

(1) Conduct a tightness test on the primary wall within 30 days of the proposed repair in accordance with Env-Wm 1401.13 or manufacturer's recommendation for testing interstitial space to ensure that the tank is sound and free of holes or fractures that may cause leaks or releases; or

(2) Conduct a site assessment in accordance with Env-Ws 412 within 30 days of the proposed repair to ensure that the tank is sound and free of corrosion and other holes or fractures that may cause leaks or releases; and

(3) Provide documentation from the tank manufacturer authorizing the repair.

(e) Following repairs to the tank and prior to adding regulated substance the owner shall submit to the department a report including:

(1) The cause and location of the failure;

(2) Procedure to return the interstitial space to its original operating condition; and

(3) Documentation from the tank manufacturer certifying the repair.

(f) Within 30 days of the repair and prior to adding regulated substance, the tank shall be tightness tested in accordance with Env-Wm 1401.13 or manufacturer's recommendation for testing the primary tank and interstitial space.

(g) The owner shall all reports and documents describing the types of the tests, contractor, date, materials, all technical testing data and any other information pertinent to the work performed, as required by Env-Wm 1401.37, to the department no later than 30 day after the test.

(h) Repairs shall be conducted and tested in accordance with Fiberglass Petroleum Tank and Pipe Institute Standard, T-95-02, Remanufacturing of Fiberglass Reinforced Plastic (FRP) Underground Storage Tanks and the Petroleum Equipment Institute's RP 100, Recommended Practices for Installation of Underground Liquid Storage Systems.

(i) Repairs to composite tanks shall be conducted in accordance with industry codes of practice developed by a nationally recognized association.

(j) Repairs to steel tanks shall be conducted in accordance with industry codes of practice developed by a nationally recognized association.

Env-Wm 1401.38 Repair and Replacement of Piping Systems.

(a) Piping systems ~~which~~ ***that*** discharge, leak, spill, or release a regulated substance to the environment shall be ~~replaced by systems meeting the requirements of Env-Wm 1401.22~~ ***permanently closed in accordance with Env-Wm 1401.18***.

(b) When a tank is removed and replaced, ~~all~~ ***the entire*** piping ***system*** shall also be replaced, unless it meets the requirements of ~~these rules~~ ***Env-Wm 1401.22 and Env-Wm 1401.24*** for ~~new~~ piping ***systems***.

(c) Prior to the repair to an integral unit of piping of less than 25 feet, the owner shall submit to the department the following information:

(1) For a single wall piping system, a passing tightness test performed in accordance with Env-Wm 1401.30(o);

(2) For a double wall piping system, a passing tightness test of the secondary containment piping performed in accordance with Env-Wm 1401.28 (c) or (e); or

(3) Results of an assessment performed in accordance with Env-Wm 1401.29 (c) to determine if any contamination is present; and

(4) Written approval from the piping manufacturer allowing the repair.

(d) No later than 30 days after the date of the repair to the piping system, the owner shall submit to the department a written report including the following:

(1) The cause for the repair, the work performed, and any other procedures required to repair the piping system back to original condition;

(2) The repair contractor's company name and telephone number;

(3) The date of the repair; and

(4) A passing tightness test performed in accordance with (c) (1) and (2), above to confirm the effectiveness of the repair.

Env-Wm 1401.39 Field-Fabricated Tanks.

(a) Field-fabricated underground storage tanks shall not be used unless the complete system is designed by a ***registered structural*** professional engineer licensed under RSA 310-A and manufactured and installed in accordance with standards of Underwriters Laboratories, Inc.~~,~~ UL 1316***, Glass-Fiber-Reinforced Plastic Underground Storage Tanks for Petroleum Products, Alcohols, and Alcohol-Gasoline Mixtures, or UL 58, Standard for Steel Underground Tanks for Flammable and Combustible Liquids.***

(b) New field-fabricated tanks shall meet all requirements of these rules for new installations.

(c) The owner shall submit plans and specifications for the field fabrication to the ~~division~~ ***department*** for approval in accordance with Env-Wm 1401.20.

(d) The registered structural ***professional*** engineer shall certify that:

(1) A field-fabricated tank is necessary because installation of a factory fabricated tank is not feasible; and

(2) The design plans and specifications meet all applicable requirements of these rules.

~~Env-Wm 1401.40 Secondary Containment for Hazardous Substance Systems.~~

~~(a) All hazardous substance underground storage systems without secondary containment and leak monitoring shall be closed by December 22, 1998.~~

~~(b) New secondary containment system installations shall meet all requirements of these rules for new installations.~~

~~(c) The owner shall submit plans and specifications for the secondary containment system installation to the division in accordance with Env-Wm 1401.20.~~

Env-Wm 1401.4~~1~~***0*** Waivers

(a) An owner may request a waiver of specific rules in this part in accordance with (b)**,** below.

(b) All requests for waivers shall be submitted in writing to the ~~division~~ ***department*** on a form obtained from the ~~division~~ ***department*;**

(c) The form shall include the following information:

(1) A description of the facility to which the waiver request relates, including the name, address, and registration number of the facility;

(2) A specific reference to the section of the rule for which a waiver is being sought;

(3) A full explanation of why a waiver is necessary;

(4) A full explanation of the alternatives for which a waiver is sought, with backup calculations and data for support; and

(5) A full explanation of how the grant of the waiver is consistent with the intent of RSA 146-C.

(d) The ~~division~~ ***department*** shall grant a waiver upon finding that:

(1) The alternatives proposed are at least equivalent to the specific requirements contained in the rule; or

(2) If the alternatives proposed are not equivalent to the requirements contained in the rule, they are adequate to ensure that the intent of RSA 146-C and these rules is met.

(e) The ~~division~~ ***department*** shall issue a written response to a request for a waiver within 60 days of receipt of the request.

Env-Wm 1401.4~~2~~***1*** Owner ~~Responsibility~~ ***Liability***. The owner may delegate responsibilities imposed by Env-Wm 1401 ***and Env-Wm 1404*** to a person responsible for the day-to-day operation of the facility. Delegation shall not relieve the owner from liability for non-compliance with these requirements.

Env-Wm 1401.4~~3~~***2*** Reference Standards.

(a) Referenced standards shall be available for inspection at the Department of Environmental Services, Waste Management Division, ~~6~~ ***29*** Hazen Drive, Concord, New Hampshire 03301 and might be available from the following sources:

(1) American National Standards Institute (ANSI),~~11 West 42nd Street, New York, N.Y. 10036, (212) 642-4900~~ ***1819 L Street, N.W. 6th Floor, Washington D.C., 20036, (202) 293-8020.***

(2) American Petroleum Institute (API), 1220 L Street, N.W., Washington, D.C. 20005, (202) 682-~~8375~~ ***000***.

(3) ~~American Society for Testing and Materials~~ ***ASTM International*** (ASTM), 100 Barr Harbor Drive, ***P.O. Box C700,*** West Conshohocken, PA 19428-2959, (610) 832-9585.

(4) ASME International (ASME), Three Park Avenue, New York, NY, 10016-5990, (800) 843-2763.

(***5) Fiberglass Petroleum Tank and Pipe Institute (FPTPI) 9801 Westheimer, #606, Houston, Texas 77042, (713) 465-3310.***

(6) International Code Council (ICC)-5203 Leesburg Pike, Suite 600, Falls Church, VA 22041, (703) 931-4533.

(4~~7~~) NACE ***International***, ~~P.O. Box 218340~~ ***1440 South Creek Drive***, Houston, Texas ~~77218, (713) 492-0535~~ ***77084-4906, (281) 228-6200***.

(~~5~~***8***) National Fire Protection Association (NFPA), **1** Batterymarch Park, ***P.O. Box 9101*** Quincy, Massachusetts 02269-***9101***, (800) 344-3555.

(~~6~~***9***) National Leak Prevention Association (NLPA) **Route 2**, PO Box ~~1643~~ ***106A*****, ~~Boise, Idaho 83701-1643~~ *Falmouth, KY 41040, (606) 654-8265.***

(~~7~~***10***)Underwriters Laboratories ***Inc.*** (UL), 333 Pfingsten Road, Northbrook, Illinois 60062-***2096*****, ~~(708) 272-8800~~ *(847) 272-8800***.

(11) Underwriters' Laboratories of Canada (ULC), 7 Underwriters Road, Toronto, ON MIR 3B4, (416) 757-3611.

(~~8~~***12***)Petroleum Equipment Institute (PEI), P.O. Box 2380, Tulsa, Oklahoma 74101-***2380***, (918) 494-9696.

(~~9~~***13***)Steel Tank Institute (STI), 570 Oakwood Road, Lake Zurich, IL 60047, ~~(798)~~ ***(847)*** 438-8265.

(b) Where citations are used in this part, the owner shall refer to the publications listed below:

(1) From the American National Standards Institute, the following:

a. Standard Number B31.3 "Chemical Plant and Petroleum Refinery Piping~~.~~***;***"

b. Standard Number B31.4 "Liquid Transportation Systems for Hydrocarbons, Liquid Petroleum Gas, Anhydrous Ammonia, and Alcohols."

(2) From the American Petroleum Institute, the following:

a. ~~Standard Number~~ ***RP*** 1604 - "~~Recommended Practice for Abandonment or Removal of used Underground Storage Station Tanks~~ ***"Closure of Underground Storage Tanks;;***"

~~b. Standard Number 1613 - "Product Removal and Ventilation Procedures;"~~

c. ~~Standard Number~~ ***RP*** 1615 - "Installation of Underground Storage Tanks ~~and Piping at Service Stations.~~***;***"

d. Standard ~~Number~~ ***STD*** 2015 - "~~Safe Entry and Cleaning of Petroleum Storage Tanks~~ ***Requirements for Safe Entry and Cleaning of Petroleum Storage Tanks.*****"**

(3) From ~~the American Society of Testing and Materials~~ ***ASTM International***, the following:

a. Standard Number ~~ES-40~~ ***G 158-98-*** "~~Emergency Standard Practices for "Procedures for the Assessment of Buried Steel Tanks prior to the Addition of Cathodic Protection~~ ***Standard Guide for Three Methods of Assessing Buried Steel Tanks***."

(4) From ~~the~~ NACE ***International***, the following:

a. Standard Number RP-0169-~~92~~***2002*** "Control of External Corrosion on Underground or Submerged Metallic Piping Systems;"

b. Standard Number RP-0285-~~95~~***2002***, "Corrosion Control of Underground Storage Tank Systems by Cathodic Protection."

(5) From the National Fire Protection Association, the following:

a. ~~Standard Number~~ ***NFPA*** 30, "Flammable and Combustible Liquids Code;"

b. ~~Standard Number~~ ***NFPA*** 30A, "~~Automotive and Marine Service Station Code~~ ***Code for Motor Fuel Dispensing Facilities and Repair Garages***;"

c. ~~Standard Number~~ ***NFPA*** 329, "***Recommended Practice for*** **Handling** ~~Underground~~ Releases of Flammable & Combustible Liquids ***and Gases***;"

d. ~~Standard Number~~ ***NFPA*** 70 "National Electric Code."

(6) From the National Leak Prevention Association, the following:

a. Standard Number 631 "Entry, Cleaning, Interior Inspection and Repair, and Lining of Underground Storage Tanks.

(7) From Underwriters Laboratories ***Inc.***, the following:

a. ~~Subject~~ ***Standard UL*** 971, "Standard for Nonmetallic Underground Piping for Flammable Liquids;"

b. Standard UL 58 ~~"~~ **"*Standard for*** Steel Underground Tanks for Flammable and Combustible Liquids;~~"~~**"**

c. Standard UL 87 ~~"~~ **"*Standard for*** Power**-**Operated Dispensing Devices for Petroleum Products;~~"~~**"**

d. Standard UL 1316 "Glass**-**Fiber**-**Reinforced Plastic Underground Storage Tanks for Petroleum Products ***Alcohols, and Alcohol-Gasoline Mixtures***~~;~~***;***"

e. Standard ~~Number~~ UL 1746 "***Standard for*** External Corrosion Protection Systems for Steel Underground Storage Tanks."

(8) From ***the*** Petroleum Equipment Institute, the following:

a. ~~Recommended Practice 100-94~~ ***RP 100*** - "~~Recommended Practices for Installation of Underground Liquid Storage Systems~~ ***External Corrosion of FRP Composite Steel Underground Storage Tanks***."

(9) From the Steel Tank Institute, the following:

a. ~~Standard~~ ***Publication*** Number ACT**-**100 "~~Specification for the Fabrication~~ ***External Corrosion Protection*** of FRP ~~CLAD/~~Composite ***Steel*** Underground Storage Tanks."

b. Publication Number ACT-100-U "Specification for External Protection of Composite Steel Underground Storage Tanks."

(c) Where there is any conflict between these rules and any of the referenced standards, the most stringent shall apply.

Env-Wm 1401.44***3*** Facility Owner Responsibility Per Statute.

(a) The owner of an underground storage facility shall comply with all requirements of Env-Wm 1401 and with the following statutes:

(1) An owner shall prohibit the discharge of regulated substance from any facility into or onto any land, groundwater, or surface water of the state in accordance with RSA 146-C:2;

(2) The owner of an underground storage facility shall register the facility with the ~~division~~ ***department*** in accordance with RSA 146-C:3;

(3) The owner of an underground storage facility shall apply to the ~~division~~ ***department*** for a permit to operate in accordance with RSA 146-C:4;

(4) The owner of an underground storage facility shall upon the request of any employee or authorized representative of the ~~division~~ ***department*** furnish information related to the facility and permit such employees or authorized representative to have access to the facility in accordance with RSA 146-C:5;

(5) At least 90 days prior to commencing construction or installation of a new or replacement underground storage system or a substantial modification of an underground storage system, the owner shall submit plans and specifications as required by RSA 146-C:7, I with the fee required by RSA 146-C:7, I-a to the ~~division~~ ***department***; and

(6) Underground storage tanks ~~which~~ ***that*** have been removed that do not meet the standards for new tanks shall not be reused as underground storage tanks for regulated substances in accordance with RSA 146-C:8.